

Truckee Meadows Regional Stormwater Quality Management Program

Prepared For Truckee Meadows Interlocal Stormwater Committee
and Nevada Division of Environmental Protection



NPDES Municipal Stormwater
Discharge Permit No. NVS000001

Table of Contents

List of Tables.....	ii
---------------------	----

List of Appendices.....	ii
-------------------------	----

Executive Summary	1
--------------------------------	----------

Section 1: Introduction	6
--------------------------------------	----------

1.1	Purpose of the Program	6
1.1.1	Overview of Program Area	7
1.1.2	The Truckee Meadows Interlocal Stormwater Committee.....	8
1.1.3	Stormwater Quality Management	8
1.1.3.1	Sources of Pollutants in Urban Stormwater Runoff	9
1.1.3.2	Environmental Impacts on Receiving Waters	12
1.1.3.3	Reducing Impacts with Best Management Practices	12
1.2	Regulatory Requirements for Urban Runoff Management	13
1.2.1	The NPDES Stormwater Permit Program	13
1.2.2	Requirements of the Current Truckee Meadows NPDES Permit	14
1.2.3	The TMDL Program and the Truckee River	15
1.3	Program History and Development Process	15
1.3.1	Goal of Program Development	16
1.3.2	Public Workshops and Technical Memoranda	16

Section 2: Program Development and Implementation	20
--	-----------

2.1	Overview	20
2.2	Program Implementation Fact Sheets.....	22
2.2.1	Intergovernmental Coordination	23
2.2.2	Public Outreach	27
2.2.3	Municipal Operations.....	33
2.2.4	Stormwater Discharge Monitoring	40
2.2.5	Land Use Planning	51
2.2.6	Structural Controls.....	58
2.2.7	Construction Site Discharge	68
2.2.8	Illicit Discharge Detection and Elimination.....	77
2.2.9	Industrial Program	89

Section 3: Program Management, Monitoring and Reporting.....	99
---	-----------

3.1	Program Management and Regulatory Compliance	99
3.2	Information and Data Management.....	101

Table of Contents (cont'd)

3.3	Annual Prioritization and Budget Development Process.....	102
3.4	Stormwater Discharge Monitoring Program	103
3.5	Annual Report	103
Section 4:	Program Schedule and Budget.....	104
4.1	Overview	104
Section 5:	References.....	109

List of Tables

1-1	Typical Pollutants Associated with Urban Land Use Activities	11
2-1	Program Elements, Acronyms and NPDES Permit Requirements	20
2-2	Master Program Matrix	21
3-1	Program Element Databases and Information Tracked.....	101
3-2	Annual Program Management and Budgeting (Typical Annual Cycle).....	102
4-1	Conceptual Long Term Implementation Schedule.....	105
4-2	Estimated Near Term Resource Requirements	107

List of Appendices

- A NPDES Permit
- B Truckee Meadows Interlocal Stormwater Committee Interlocal Agreement
- C Final Technical Memoranda (Separately Bound Volume)

Executive Summary

Purpose of the Program

The purpose of the Truckee Meadows Regional Stormwater Quality Management Program (RSQMP) is to establish a comprehensive approach for reducing pollution in municipal stormwater discharges in the Truckee Meadows. Studies conducted by the U.S. Environmental Protection Agency indicate that polluted urban runoff is a leading cause of impairment to receiving water bodies across the country (USEPA, 2000). The majority of urban runoff in the Truckee Meadows discharges to the Truckee River, which provides the major source of the area's drinking water supply. The RSQMP will be a key element to maintaining and enhancing water quality in the Truckee River and the quality of life in the Truckee Meadows.

The RSQMP has been developed and will be implemented by the Cities of Reno and Sparks, Washoe County and the Nevada Department of Transportation (NDOT). In January of 2000, the Nevada Department of Environmental Protection (NDEP) issued a stormwater discharge permit to these agencies requiring the development, implementation and enforcement of a RSQMP. The stormwater discharge permit is a component of the National Pollutant Discharge Elimination System (NPDES), a program established by the Clean Water Act amendments of 1987.

Program Area

The area known as the Truckee Meadows consists of the Cities of Reno and Sparks and the adjacent urbanized areas in the southern portion of Washoe County. The NPDES permit issued jointly to the four permittees authorizes discharge of municipal stormwater runoff to the receiving waters of the Truckee River, Silver Lake Playa, Swan Lake Playa and Whites Lake Playa and to the tributaries that drain to these water bodies.

Program Organization

The Truckee Meadows Interlocal Stormwater Committee, which consists of representatives from the Cities of Reno and Sparks, Washoe County and NDOT, conducted a series of public workshops throughout 2000 and 2001 to discuss and develop the required elements of the RSQMP. The objective of the workshops was to define local water quality goals, discuss the concerns and common interests of stakeholders and interested parties in the Truckee Meadows and to design a program to meet the requirements of the NPDES permit. A secondary objective was to maximize the integration of the RSQMP implementation into existing programs and resources to the greatest degree possible.

The Truckee Meadows RSQMP is a comprehensive program comprised of efforts by local governments and private citizens to reduce the pollution associated with urban runoff in the Truckee Meadows. The program includes nine program elements to address the requirements of the NPDES permit. The program elements include intergovernmental coordination, public outreach, municipal operations, stormwater discharge monitoring, land use planning, structural controls, construction site discharge, illicit discharge detection and elimination and an industrial program. These elements, discussed in detail in Section 2.0, are briefly summarized below.

Intergovernmental Coordination - The goal of this program element is to establish clear roles and responsibilities among the local jurisdictions for program development and implementation and to establish the relationship of the local program to the state program. The City of Reno, City of Sparks, Washoe County and the Nevada Department of Transportation (NDOT) will enter into a new formal agreement for program development and implementation and will assign a Stormwater Coordinator to manage the program and assist in overall program development.

Public Outreach - This program element is intended to increase public awareness of the RSQMP as a whole, individual program elements and their components, and water quality issues related to stormwater runoff. The program will include the continued and expanded use of existing educational materials and programs (including storm drain stenciling or similar), development of new materials and programs, advertising a complaint/reporting hotline system developed by the agencies, and development of a RSQMP web site. New programs and materials might include new bilingual pamphlets, press releases, and television and radio programs describing the development of the program and other water quality related issues. In addition, new business, school and community presentations and events will be conducted.

Municipal Operations - The Municipal Operations Program will improve existing maintenance activities such as street sweeping, catch basin cleaning, ditch cleaning, and storm drain line cleaning to better protect water quality. This program element will include new policies, procedures, guidance documents, design criteria, training, a database and a study of street sweeper technologies and practices. The permittees will participate in the Washoe County Board of Health's effort to upgrade street sweepers and study alternative deicing methods. The primary purpose of the Board of Health's effort is to improve air quality in the Truckee Meadows during the winter months. Conversion to higher efficiency street sweepers will also help to augment stormwater quality improvements. New policies and procedures might include modifying maintenance procedures at areas determined to be environmentally sensitive or problematic.

Stormwater Discharge Monitoring - This program will establish automated monitoring stations to collect stormwater runoff samples. Samples will be tested at a state approved analytical laboratory and estimates of the pollutant loadings associated with local land uses will be calculated and reported in annual reports. Program components will include an interagency agreement, written policies and procedures, a technical manual, staff training, database tracking, public education and special studies such as an evaluation of the effectiveness of best management practices (BMPs) and the impacts of urban runoff on the Truckee River.

Land Use Planning - The goal of this program element is to develop a set of land use planning BMPs that reduce runoff and protect water quality. Land use planning programs, techniques and educational methods used in other communities will be investigated to help determine what would be appropriately applied to the Truckee Meadows. A program for the Truckee Meadows might include mechanisms for modifying project densities (e.g. transfer of development rights, planned unit developments), new site design requirements (e.g. riparian setbacks, calculation of impervious coverage), land conservation tools (e.g., conservation easements, deed restrictions) and public outreach methods to encourage land use planning designs that protect water quality.

Structural Controls - This program will implement structural BMPs at areas of new development and significant redevelopment. Structural controls are defined as physical features, facilities and management activities that are designed to filter, trap and remove pollutants transported in urban runoff. Program components will include new policies and procedures, ordinance revisions, drainage manual revisions, training for staff, project designers and developers, database tracking, complaints reporting and public education and outreach on structural BMPs. The goal will be to provide written guidance and training to local government staff, project designers, developers and structural BMP owners regarding the design, operation, inspection and maintenance of structural controls. Revision of existing jurisdictional drainage design manuals will include a new chapter on structural controls for stormwater quality. This new chapter will include technical guidance on the selection, siting, sizing, operation and maintenance of structural controls designed to enhance stormwater quality.

Construction Site Discharge - This program will integrate stormwater management into the existing regulatory program for grading permit plan review. The program will include Stormwater Pollution Prevention Plans, inspection and enforcement mechanisms. Program components will be written policies and procedures, ordinance revisions, a revised Construction Activities BMP Handbook, training for staff, site designers and operators, a database, complaints reporting and web site information. Local governmental departments and organizations such as the Community Development Departments for the Cities of Reno and Sparks and Washoe County and the Washoe-Storey Conservation District will be directly involved in this program.

Illicit Discharge Detection and Elimination - The IDDE program will formalize an inspection and enforcement program for detecting and eliminating illegal discharges and connections. The program will include ordinance revisions, adoption of new policies and procedures, a technical manual, staff training, storm drain mapping, complaints reporting, posting information on the web site, public outreach and the research and development of a free household hazardous waste disposal program. Among other activities, outfalls along the Truckee River will be physically surveyed and sampled annually. Illicit discharges detected from outfall monitoring will be traced to determine and eliminate sources. Local governmental departments such as the Environmental Control Sections for the Cities of Reno and Sparks will be directly involved in this program. The program will build upon existing efforts such as the sanitary sewer pretreatment program.

Industrial Program - The industrial discharge regulation program will build on the existing wastewater pretreatment program, incorporating stormwater quality management into the regulatory program for industrial wastewater control. The program involves written policies and procedures, ordinance revision, database tracking, an industrial BMP handbook, training for inspectors, complaints reporting and posting information on the web site. Local governmental departments such as the Environmental Control Sections for the Cities of Reno and Sparks will be directly involved in this program.

Program Management, Monitoring and Reporting

Some of the components described in the nine RSQMP elements above will be conducted jointly (e.g. development of technical manuals, staff training), while others will be coordinated independently between the four permittees (e.g. adoption of ordinances, database development/modification). The Stormwater Coordinator will be responsible for program management to ensure coordination and consistency during the program development implementation and process.

The following are the key annual dates necessary to ensure that all of the components of the RSQMP will be implemented within the approved schedule established by the TMISC and NDEP during the September 26, 2001 public workshop. Deadlines noted in *italics* are specified in the NPDES permit and the committee's Interlocal Agreement for certain activities.

<i>January 14:</i>	<i>Submit annual report to NDEP and EPA.</i>
<i>July:</i>	<i>Elect TMISC Chair; begin implementation of annual work plan.</i>
October:	Update stormwater discharge monitoring plan.
October-December:	Develop annual work plan and budget for next fiscal year.
<i>November 1:</i>	<i>Submit monitoring plan for following year to NDEP and EPA.</i>
November/December:	Develop annual report.

The NPDES permit states that copies of all reports and plans required in the permit (e.g. the Stormwater Discharge Monitoring Plan and Annual Reports) shall be submitted to NDEP and the U.S. Environmental Protection Agency Region IX (See Appendix A: Permit No. NVS000001, Part II, 9).

Schedule Summary

Section 4 provides a conceptual long-term implementation schedule for the RSQMP through fiscal year 2006/7. The schedule proposes to phase in all of the required program elements over a six-year period. This approach will allow the development of interagency agreements prior to other program components such as technical manuals, staff training and database development. The schedule is designed to provide the TMISC agencies the time necessary to form committees, pass ordinances, establish funding initiatives and dedicate the staff necessary to successfully implement all of the elements of the RSQMP.

The nine RSQMP elements will be developed and implemented in the following order:

- Intergovernmental Coordination and Public Outreach;
- Municipal Operations and Stormwater Discharge Monitoring;
- Structural Controls, Construction Site Discharge, and Land Use Planning; and
- Illicit Discharge Detection and Elimination and the Industrial Program.

The Intergovernmental Coordination and Public Outreach elements will begin first so that clear roles and responsibilities are established and public awareness of the RSQMP occurs early on. The Municipal Operations program will focus on improving existing programs and early initiation of the Stormwater Discharge Monitoring program is required by the NPDES permit. The programs that address new development (Structural Controls, Construction Site Discharge and Land Use Planning) will be initiated and developed concurrently, with the IDDE and Industrial Program following by one year.

As with all Stormwater Quality Management Programs across the country, the Truckee Meadows RSQMP is a dynamic program that will evolve and change as new regulations become effective and results from local and national studies becomes available. The RSQMP is intentionally general in some areas so that it can be adjusted to on an annual basis. The TMISC may revise the activities and schedule each year and submit the revised plan to NDEP and EPA in the annual report. The plan submitted herein for approval (by NDEP) is for development and implementation of the RSQMP from fiscal year 2001/2 to 2003/4.

Budget Summary

The total estimated resources required to develop and implement the Truckee Meadows RSQMP through fiscal year 2003/4 is approximately 5,300 labor hours/year. Existing and/or new staff will conduct the majority of work required to complete the required tasks. Consultant services will be used for specific work products and to provide support as requested.

Section 1: Introduction

1.1 Purpose of the Program

This document and its appendices comprise the Truckee Meadows Regional Stormwater Quality Management Program (RSQMP). It has been developed and will be implemented by the Cities of Reno and Sparks, Washoe County and the Nevada Department of Transportation (the permittees). In January of 2000, the Nevada Department of Environmental Protection (NDEP) issued a municipal stormwater permit to the permittees requiring the development, administration, implementation and enforcement of a plan to reduce pollution in the urban runoff that flows through their storm drains in the Truckee Meadows (termed “stormwater”). As noted in the municipal stormwater permit issued by NDEP (Appendix A), the purpose of the RSQMP is to reduce the pollution in municipal stormwater discharges to the maximum extent practicable. “Maximum extent practicable” is a regulatory standard developed by the U.S. Environmental Protection Agency that has been interpreted to give local governments some flexibility in developing stormwater management programs that are adapted to their local conditions.

The water bodies that are authorized to receive urban stormwater from the permittees are the Truckee River and tributaries, Silver Lake, Swan Lake and Whites Lake Playas and their tributaries. The majority of the municipal stormwater runoff in the Truckee Meadows discharges to the Truckee River. Because the river is a major source of the area’s drinking water supply and is a year-round river located in an arid environment, its protection is particularly important. The Truckee River has a number of programs that have been instituted for its protection. The RSQMP is designed to address the pollution associated with urban runoff and will help to support the water quality goals for the Truckee River, the quality of life of the Truckee Meadows, the health of the river downstream and water quality in Pyramid Lake.

Although precipitation is infrequent in northern Nevada, pollutants that accumulate on private and public property, roadways and parking lots are often transported by urban runoff through the area’s municipal storm drain system and directly into the Truckee River untreated. Discharges from the area’s municipal storm drain system occur not only as a result of rainfall and snowmelt events, but also during dry weather from sources such as water draining into streets from construction site activities, watering and cleaning activities at residential and commercial sites, flushing fire hydrants and illicit discharges and connections. These dry weather flows can also transport significant amounts of pollution into local water bodies (Pitt and Lalor, et. al., 1993). Polluted urban runoff threatens public health, fish, wildlife, recreational and aesthetic values in the Truckee Meadows. Studies conducted by the U.S. Environmental Protection Agency indicate that polluted urban runoff is a leading cause of impairment to approximately 40 percent of the surveyed water bodies in the country (USEPA, 2000).

Congress under the Clean Water Act mandated the National Pollutant Discharge Elimination System (NPDES) Stormwater Program in 1990. This program provides a comprehensive approach for addressing non-agricultural sources of pollution that are adversely affecting the quality of our nation's waters. NPDES stormwater permits require cities to implement source controls designed to reduce and prevent harmful pollutants from being washed by runoff into

local water bodies. In Nevada, the NPDES Program is administered and implemented by the state through the NDEP. The requirements of the permit apply to all urban development, whether public or private. As stated in the NPDES permit issued to the permittees on January 14, 2000 “The goal (of this RSQMP) shall be to reduce pollutants to a level compatible with the beneficial uses designated for the receiving waters.”

The Total Maximum Daily Load (TMDL) Program is another federal program designed to manage water pollution to water bodies that are not meeting federal water quality standards, such as the Truckee River. Although the RSQMP is a separate program and its activities are not required by the TMDL Program, it could have the secondary benefit of helping to manage the TMDLs that have been established for the Truckee River. The RSQMP will be required to provide pollutant load estimates for stormwater discharges and pollutant load reductions through the new programs and activities of the permittees. The NPDES and TMDL Programs are discussed in greater detail in Section 1.2.

The RSQMP is a comprehensive program that has been developed through a series of public workshops attended by local governments and private citizens. It has been designed to address the unique political, socioeconomic, geographic and climatic conditions of the Truckee Meadows as well as the conditions of the NPDES permit. This document presents a comprehensive approach to implementing the RSQMP and contains priorities, approaches, guidance and schedules for programs, activities and effectiveness evaluation for the term of the current NPDES permit. The RSQMP is a living document that will require periodic modifications to ensure that it is effectively accomplishing its objectives.

1.1.1 Overview of Program Area

The area known as the Truckee Meadows consists of the Cities of Reno and Sparks and the immediate adjacent urbanized areas in the southern portion of Washoe County. The NPDES permit issued jointly to the permittees authorizes discharge of municipal stormwater runoff to the receiving waters of the Truckee River, Silver Lake Playa, Swan Lake Playa and Whites Lake Playa and to the tributaries that drain to these water bodies. Discharge of municipal stormwater runoff to these water bodies is contingent upon monitoring requirements and other conditions set forth in the permit (see Appendix A).

Nevada has experienced a tremendous growth in population over the past decade and is the fastest growing state in the country. Washoe County demographics indicate the County currently has a population of approximately 336,000 and is projected to grow to approximately 390,000 by 2010 (Nevada State Demographer, 2000). The majority of this population resides in the Truckee Meadows. The Truckee River bisects the Truckee Meadows into north and south sections and provides the major source of drinking water supply to the area. It also provides numerous recreational opportunities and habitat for fish and wildlife. Continued growth and discharge of untreated stormwater runoff into the Truckee River threatens many aspects of this important resource.

The Truckee River originates in the Sierra Nevada Mountains, flowing from the Lake Tahoe Basin in California/Nevada and terminating at Pyramid Lake in Nevada. The Truckee River watershed encompasses approximately 2,300 square miles, containing parts of the Nevada counties of Washoe, Pershing, Churchill, Lyon, Douglas, Carson City, and Storey County. The majority of the high quality water flowing in the Truckee River originates from the upper watershed area contained in California. The climate in the Truckee Meadows area is arid, with low humidity and an average annual rainfall of approximately 7 inches (WRCC, 2000).

The Cities of Reno and Sparks, Washoe County and NDOT operate and maintain a large municipal storm drainage system in the Truckee Meadows that consists of more than 9,100 catch basins, 300 miles of underground storm drain pipes, 100 miles of open ditches, and a number of wet pond structures and dry pond detention basins that are used primarily for flood control. Most of the stormwater that drains into the Truckee Meadows municipal storm drain system is conveyed directly to the receiving waters of the Truckee River, Silver Lake Playa, Swan lake Playa and Whites Lake Playa and to their tributaries untreated.

1.1.2 The Truckee Meadows Interlocal Stormwater Committee

The Truckee Meadows Interlocal Stormwater Committee was formed in response to the first NPDES permit issued jointly to the City of Reno, the City of Sparks, Washoe County, and NDOT on July 31, 1990. With the City of Reno as the lead agency, the permittees entered into an interlocal agreement to define responsibilities and address permit requirements in a coordinated effort. Responsibilities of the committee include the following:

- Complying with the NPDES permit conditions;
- Coordinating and participating in committee meetings;
- Funding and implementing NPDES permit compliance efforts;
- Coordinating and implementing annual operating budgets for jointly shared tasks;
- Submitting reports prepared by various parties to NDEP and the USEPA as required by the NPDES permit; and
- Maintaining knowledge of current and proposed state and federal policies, regulations and programs that impact “non-point”¹ source pollution programs such as the RSQMP.

The committee is currently responsible for the development, administration, implementation and enforcement of the RSQMP, a requirement of the second NPDES permit, issued 14 January 2000. The committee consists of a single representative from the City of Reno, the City of Sparks, Washoe County, and NDOT. Working with a consultant team and NDEP, it conducted a series of public workshops since September 2000 to develop the RSQMP. A copy of the interlocal agreement is presented in Appendix B.

1.1.3 Stormwater Quality Management

Improved construction and engineering techniques in the 1950’s through the 1970’s led to the development of efficient storm drainage systems designed to quickly convey rainwater from streets and other impervious urban surfaces to streams and rivers. It soon became apparent that localized flooding was often caused by increased suburban growth and the importance of stormwater detention basins was recognized. Detention facilities became a standard site development requirement in many urban areas across the country and regional stormwater quantity management and planning became commonplace. Water pollution control efforts at

¹ Non-point source pollution is a regulatory term referring to diffuse pollution sources (i.e., without a single point of origin or not introduced into a receiving stream from a specific outlet). Pollutants are generally carried off the land by storm water from sources such as agriculture, forestry, urban, mining, construction, dams, channels, land disposal, and city streets (USEPA, 1997).

the time focused on regulation of “point” sources of pollution, such as monitoring and onsite treatment of industrial process water prior to discharge to a receiving water body.

In the 1980’s, the environmental movement led to numerous studies, such as the National Urban Runoff Program (USEPA, 1983), which provided a body of information that urban areas contribute a significant amount of non-point source pollution to local water bodies through stormwater discharges from municipal storm drain systems. These studies and numerous legal actions by environmental organizations culminated in the early 1990’s with the publication of Federal regulations that required municipalities to control pollution in urban runoff. Comprehensive stormwater quality management began across the nation with the emphasis initially being placed on regulating the largest cities first.

In the Truckee Meadows, municipal storm drainage facilities include gutters, swales, ditches, culverts, storm drain inlets, catch basins, storm drain pipes and detention basins. These facilities have been primarily designed to provide efficient drainage and flood control. The design, planning and construction of these facilities is regulated and managed under existing policies and ordinances with dedicated staff. Existing standard plans and specifications, public works design manuals and jurisdictional drainage design manuals provide technical guidance. Dedicated staff and equipment financed by street and road budgets routinely conduct maintenance of publicly owned facilities. Some privately owned storm drainage facilities such as detention basins tend to be poorly maintained, becoming ineffective nuisances and eyesores (Dennis Dobyns, personal communication). A few public facilities have also reportedly received inadequate maintenance (Laura Tuttle, personal communication). Pollution control programs and structural controls can become susceptible to the same fate if appropriate institutional mechanisms, which provide legal authority, financial support, organizational structure and technical guidance, are not in place. The goal of the RSQMP is to outline priorities, approaches and guidance to ensure that these institutional mechanisms are in place and the Program is successful. In addition to being a Federal and State requirement, stormwater quality management is a key element to maintaining and enhancing the quality of life in the Truckee Meadows.

Stormwater quality management programs across the country typically include a number of elements to address the wide range of pollutant sources in urban stormwater runoff. These program elements typically include public outreach, municipal operations, stormwater discharge monitoring, land use planning and structural controls for new development and redevelopment, construction and industrial site elements and illegal discharges. Each of these program elements requires the implementation of Best Management Practices (i.e. activities to that directly or indirectly protect water quality, known by the acronym BMPs).

1.1.3.1 Sources of Pollutants in Urban Stormwater Runoff

Pollutant sources in urban stormwater runoff include industrial, commercial and residential sites, construction sites and municipal facilities such as parks and roadways. In an urban setting, anything dumped, dropped or leaked onto the ground or exposed to rainfall, washing or watering activities can and often does contribute to stormwater pollution. Agricultural sources of pollution in stormwater runoff are typically not addressed in municipal stormwater quality management programs and are addressed under separate State and Federal programs.

Table 1-1 presents a summary of the typical types of pollutants that are often transported in urban stormwater runoff and discharged into local creeks and rivers, such as the Truckee River. Each of the land use types listed on Table 1-1 can also contribute trash and debris (fast-food

wrappers, cigarette butts, packaging materials, etc.) into local creeks and rivers. Atmospheric deposition of pollutants from such sources as automobile exhaust and industrial activities is another significant source of pollutants. In addition, combined sewer systems and cross connections between the sanitary sewer and storm drain systems exist in the older portions of some cities. If these structures discharge directly to a water body without treatment, they can contain human and industrial waste, toxic materials and debris. Finally, illegal discharges from illicit connections or illegal disposal of wastes into the storm drain system can provide a substantial contribution to the annual pollutant load.

Table 1-1 Typical Pollutants Associated with Urban Land Use Activities		
Land Use Type	Activities	Typical Pollutants
Residential	<ul style="list-style-type: none"> ▪ Landscape/yard maintenance ▪ Car washing ▪ Car maintenance (e.g., oil changing) ▪ Painting and remodeling ▪ Storage and disposal of household chemicals and hazardous wastes ▪ Pet management 	Pesticides, herbicides, fertilizers, landscape debris, detergents, oil and grease, solvents, paints, household chemicals and pet wastes Note: Excess runoff from overwatering is a problem, since this water carries additional pollutants to local creeks and rivers
Commercial/Light Industrial	<ul style="list-style-type: none"> ▪ Landscape maintenance ▪ Outdoor (exposed) loading areas, material and equipment storage ▪ Public parking areas ▪ Painting and remodeling ▪ Storage and disposal of chemicals and hazardous wastes 	Pesticides, herbicides, fertilizers, detergents, oil and grease, solvents, paints, metals, sediments/gravel (from landscape and parking areas) and other wastes
Heavy Industrial	<ul style="list-style-type: none"> ▪ Outdoor (exposed) loading areas ▪ Outdoor (exposed) material and equipment storage (including aboveground storage tanks) ▪ Outdoor (exposed) manufacturing/processing areas ▪ Fueling areas ▪ Vehicle and equipment washing, maintenance, and/or parking areas ▪ Storage and disposal of chemicals and hazardous wastes 	Oil and grease, hydraulic fluids, petroleum hydrocarbons, solvents, metals, sediment/ gravel, detergents and other materials and wastes used at the facility
Construction Sites	<ul style="list-style-type: none"> ▪ Clearing and grading ▪ Concrete and asphalt work ▪ Painting ▪ Dewatering activities ▪ Exposed storage of materials onsite ▪ Landscaping 	Sediment/gravel (from eroded surfaces or stored materials), concrete slurry, paints, oil and grease, hydraulic fluids, petroleum hydrocarbons, pesticides, herbicides and fertilizers, contaminated pumped groundwater and other waste materials
Transportation Corridors	<ul style="list-style-type: none"> ▪ Continuous automobile, truck and bus use ▪ Utility company trenching and construction activities ▪ Road repair and resurfacing activities ▪ Roadside vegetation maintenance ▪ Truck spills ▪ Deicing activities 	Oil and grease, hydraulic fluids, petroleum hydrocarbons, metals (e.g., copper, lead, zinc), sediment/gravel, deicing chemicals (e.g., salt, brine, sand), pesticides, herbicides and fertilizers, spilled waste materials
Parks, Recreational Areas and Golf Courses	<ul style="list-style-type: none"> ▪ Landscape maintenance ▪ Use by pets and livestock 	Fertilizers, herbicides, pesticides, sediment/gravel, landscape debris, fecal waste (bacteria/pathogens)

Source: Modified from Sacramento County Stormwater Quality Improvement Plan – November 2000 Draft

1.1.3.2 Environmental Impacts on Receiving Waters

The water quality of urban streams and rivers is typically impacted by two phases of urbanization: construction and post development. Significant sediment loads from upland construction sites typically enter urban streams during rainfall runoff events, even if erosion and sediment control measures are in place (Roesner and Urbonas et al., 1998). For any given urban land area, sediment contributions typically decline to less than predevelopment levels once impervious structures and surfaces are constructed and landscaping is in place. The dominant source of stormwater pollution then becomes the accumulated deposits on developed impervious surfaces that are washed into urban streams during storms or watering and washing activities. Although sediment loading may decrease, the range and concentration of other constituents in stormwater runoff tend to increase. In general, constituent concentrations in urban streams are one to two orders of magnitude greater than those in undisturbed and undeveloped watersheds (Roesner and Urbonas et al., 1998). The degree of loading has been shown to be directly proportional to the percentage of watershed imperviousness (Schueler, 1987). Higher loadings can cause water quality problems such as increased turbidity, nutrient enrichment, bacterial contamination, deposition of toxic compounds, increases in water temperature and deposition of trash and debris. When left uncontrolled, stormwater pollution can result in the destruction of fish, wildlife, and habitats; threats to public health due to contaminated food and drinking water supplies; and losses of recreational and aesthetic values of waterways.

1.1.3.3 Reducing Impacts with Best Management Practices

Comprehensive stormwater quality management establishes methods and strategies to (1) control pollution at the source and (2) treat polluted stormwater with structural controls. Source controls use programs, activities and regulatory measures to prevent pollutants from entering runoff. Maintenance of the storm drain system is also considered a source control; pollutant sinks within the system can become pollutant sources if not removed prior to storm events. Structural controls are engineered solutions specifically designed to filter, trap and remove pollutants in the storm drain system prior to discharge into receiving waters. Source and structural controls are stormwater quality management measures collectively referred to as Best Management Practices (BMPs). Successful stormwater quality management programs across the country apply a wide range of BMPs on a watershed-wide basis. The technical memoranda provided in Appendix C present detailed discussions of the BMPs used in other communities.

1.2 Regulatory Requirements for Urban Runoff Management

The Truckee Meadows Interlocal Stormwater Committee is legally bound to address the pollution associated with urban runoff based on the requirements of the National Pollutant Discharge Elimination System (NPDES) Stormwater Permit Program. In Nevada, this program is administered and implemented by the state through the Nevada Division of Environmental Protection (NDEP). The NPDES permit allows the Cities of Reno and Sparks, Washoe County and NDOT to discharge municipal stormwater runoff and requires these permittees to form a committee and to develop, administer, implement and enforce a stormwater quality management program.

1.2.1 The NPDES Stormwater Permit Program

In 1987, Congress amended the Federal Water Pollution Control Act (also known as the Clean Water Act) in order to protect receiving water bodies from the impacts of urban runoff. The Clean Water Act prohibits the discharge of any pollutant to waters of the United States from sources such as a factories or sewage treatment plants, unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit. These discrete, identifiable sources of water pollution are termed “point sources” and the NPDES program was designed to regulate such sources. The 1987 amendments to the Clean Water Act defined stormwater discharges as point source discharges and established a framework for regulating municipal and industrial discharges under the NPDES program. In response to the 1987 amendments, the U.S. Environmental Protection Agency (EPA) promulgated the final regulations in 1990 that established the permit requirements for Phase I of the NPDES Stormwater Program (USEPA, 2000).

The Phase I NPDES Stormwater Program addressed sources of stormwater runoff that had the greatest potential to negatively impact water quality nationwide. Under Phase I, EPA required NPDES permit coverage for stormwater discharges from medium and large municipal separate storm sewer systems (MS4s) located in incorporated places or counties with populations of 100,000 or more. In addition, Phase I required permit coverage for discharges from eleven categories of industrial activities, including construction activities that disturb five or more acres of land. In response to the Phase I NPDES permit requirements; the State of Nevada issued the City of Reno, the City of Sparks, Washoe County and NDOT their first permit on 31 July 1990.

In 1999, the EPA published the Phase II Final Rule for the NPDES Stormwater Program, which will take effect in March 2003. In addition to requiring permit coverage for stormwater discharges from certain regulated small MS4s, Phase II also lowered the threshold for construction activities regulation from five acres to one acre of disturbance. Under Phase II, operators of regulated small MS4s are required to design their programs to reduce the discharge of pollutants in stormwater to the “maximum extent practicable” (MEP), to protect water quality and to satisfy the appropriate requirements of the Clean Water Act. While Phase II rules do not supersede the Phase I requirements, Phase I communities such as the Truckee Meadows are encouraged by EPA and the State of Nevada to meet these minimum requirements. The Phase II Rule defines a small MS4 stormwater management program as a program comprised of six “minimum control measures” that, when implemented in concert, are expected to result in significant reductions of pollutants discharged into receiving water bodies (USEPA, 2000). These “minimum control measures” consist of the following elements; Public Education and Outreach, Public Participation/Involvement, Illicit Discharge Detection and Elimination, Construction Site Runoff Control, Post Construction Runoff Control and Pollution

Prevention/Good Housekeeping. The Truckee Meadows RSQMP has been developed to meet these “minimum control measures.” This program is described in detail in Section 2.

1.2.2 Requirements of the Current Truckee Meadows NPDES Permit

In accordance with the provisions of the Federal Water Pollution Control Act, the City of Reno, as lead agency for the Truckee Meadows Interlocal Stormwater Committee, applied for and was granted a National Pollutant Discharge Elimination System (NPDES) permit in January 2000. The Nevada Division of Environmental Protection (NDEP) issued the permit to the City of Reno, the City of Sparks, Washoe County and NDOT (the permittees). The permittees own and operate the municipal storm drain system in the Truckee Meadows. The 5-year NPDES permit authorizes them to discharge municipal stormwater runoff to the receiving waters of the Truckee River, Silver Lake Playa, Swan Lake Playa and Whites Lake Playa and their tributaries. The permit requires that the permittees develop and implement a stormwater quality management program that includes the following elements:

1. Best Management Practices - BMPs for local government operations, including standard plans and specifications, storm drain maintenance, street sweeping, litter control, spill response and hazardous material disposal.
2. Stormwater Discharge Monitoring - Development and implementation of monitoring program to assess the quality of stormwater discharges, the effectiveness of BMPs and the RSQMP, and the impacts on receiving waters.
3. Illegal Discharge Detection and Elimination - Development and implementation of a program to detect and eliminate illegal discharges.
4. Structural Controls for Water Quality Improvements - Consideration of structural controls in site drainage plans, storm drain projects and flood control projects.
5. Discharges to Storm Drains and Watercourses - A plan and schedule for developing and implementing a local program for the regulation of stormwater discharges from industrial facilities and construction sites.
6. Public Education and Participation - Outreach to the public to provide information on stormwater pollution and its management and to ensure public participation in program development and implementation.
7. Intergovernmental Coordination - Inclusion of appropriate government agencies in implementation of the program.

These elements are typical of municipal stormwater quality management programs across the country, with the exception of Discharges to Storm Drains and Watercourses (5 above). While all cities under municipal NPDES stormwater permits must provide a degree of industrial site and construction site discharge management (which varies according to the state water quality agency requirements), the NDEP has required that the permittees establish and implement a full regulatory program that will essentially substitute for the current state permitting program for construction and industrial sites as well as all other significant commercial and institutional sources.

The NPDES permit also requires the submittal of annual reports. Requirements that must be addressed and summarized in an annual report are discussed in Section 3.5.

1.2.3 The TMDL Program and the Truckee River

In addition to the NPDES Stormwater Permit Program, the Clean Water Act also established a program to manage water pollution to water bodies that are not meeting federal water quality standards. Section 303(d) requires that states establish a list of water bodies that are impaired by water pollution, and to assess the sources of that pollution. For water bodies listed as impaired, states must assess the amount of pollution that a water body can receive without violating water quality standards. That amount of pollution is termed a “Total Maximum Daily Load” (TMDL). The TMDL is then allocated among the different sources, including point sources, runoff sources and natural sources, and management activities are implemented to reduce the pollution.

Several TMDLs have been established for the Truckee River, addressing three pollutants: nitrogen, phosphorus and total dissolved solids (USEPA, 1994). The nitrogen and phosphorus concentrations in the river have historically caused excessive plant and algal growth, which depletes oxygen when the plants die and decay. Oxygen depletion can result in the destruction of fish, wildlife, and habitats. The NDEP has identified a number of programs and projects to contribute to the management of pollution in the Truckee River, including the NPDES stormwater permit program for the Cities of Reno and Sparks, Washoe County and NDOT. NDEP does not set specific requirements for TMDL implementation by the local governments’ management of their stormwater. However, the activities that will be implemented for the RSQMP will serve to improve water quality in the Truckee River and should support the goals of the TMDL program.

1.3 Program History and Development Process

Stormwater quality management activities in the Truckee Meadows initially began in response to the first NPDES permit issued jointly to the permittees on 31 July 1990. The permittees formed the Truckee Meadows Interlocal Stormwater Committee (TMISC) and entered into an interagency agreement to define responsibilities and address the permit requirements in a coordinated effort. The permit required preparation of a drainage basin map with outfalls to the Truckee River identified, an inventory of existing BMPs, an inventory of potential sources of commercial and industrial pollution, a work plan for a stormwater monitoring program and submittal of monitoring program reports at 24, 36 and 48 months after the effective date of the permit. Stormwater monitoring took place between October 1990 and February 1992 with grab samples collected from all major storm drain outfalls located along the Truckee River within the Truckee Meadows and monitoring reports submitted at the specified intervals.

In response to the second NPDES permit issued 14 January 2000, the committee hired the consultant team of Kennedy/Jenks Consultants and AMEC (formerly Ogden Environmental) to develop the RSQMP for the Truckee Meadows. The Regional Water Planning Commission agreed to participate in the development of the RSQMP by providing partial funding for program development. A total of 14 public workshops were conducted between May 2000 and September 2001 to research, discuss and develop the required elements of the RSQMP and to address the concerns and common interests of stakeholders and interested parties in the Truckee Meadows. Developing the RSQMP involved research of existing programs, activities, facilities and regulatory measures in the Truckee Meadows that have direct and/or indirect

storm water quality benefits. A number of communities across the nation have already developed stormwater quality management programs and have implemented program elements similar to those required by the NPDES permit for the Truckee Meadows. These programs were reviewed and provided valuable information and models for the development of the Truckee Meadows RSQMP.

A Stormwater Discharge Monitoring Plan was the first element of the RSQMP to be developed and finalized. The plan was approved by NDEP and became effective on 1 July 2001. The other required elements of RSQMP (See Section 1.3.2) were developed throughout 2000 and 2001 and technical memoranda on these elements were finalized on 15 August 2001. On 19 September 2001 a draft of the final program was presented at a public workshop to the TMISC and the public works directors and managers of the Cities of Reno and Sparks, Washoe County and NDOT. This document represents the finalized RSQMP based on the comments received during and since the September 19 workshop.

1.3.1 Goal of Program Development

The objective of program development was to define local water quality goals and objectives and to design a program to meet those objectives as well as the requirements of the NPDES permit. A secondary objective was to maximize the integration of the RSQMP implementation into existing programs and resources to the greatest degree possible. Throughout 2000 and 2001, TMISC members and other stakeholders participated in a series of public workshops to determine the goals of the program, the implementation approach and the implementation timeline. The following section describes the program development process.

1.3.2 Public Workshops and Technical Memoranda

The consultant team compiled records of existing programs, facilities and activities for local stormwater management in the Truckee Meadows to identify how they are currently working to achieve local water quality goals and how they could be utilized, improved and expanded in the RSQMP. In addition, they investigated established stormwater quality management programs in other communities to identify program elements, costs, schedules, objectives and accomplishments that could be adapted to the Truckee Meadows. This and other relevant information was compiled into a series of draft technical memoranda that were presented to the TMISC at public workshops. The committee members and others who attended the workshops provided comments, which were incorporated into the final memoranda accepted by the TMISC. The consultant team then compiled the recommendations from the final memoranda into a series of “fact sheets” that describe the program development and implementation activities that constitute the RSQMP (See Section 2 – Program Development and Implementation). This submittal also included a program schedule and labor hour estimates for each proposed program component (See Section 4 – Program Schedule and Budget).

The technical memoranda discussed below address the required NPDES permit program elements outlined in Section 1.2.2. Following is a chronological discussion of the public workshop and technical memoranda development process.

Nonstructural Best Management Practices (BMPs) - Staff from each of the TMISC agencies participated in identifying existing BMPs and programs with potential water quality benefits, through interviews, meetings and public workshops. The review emphasized standard plans and specifications, maintenance of the storm drain system, street sweeping, litter control, spill

response, hazardous materials disposal, and land use planning. As a result of this research, Technical Memorandum No. 1.0, entitled “Existing Nonstructural Stormwater Best Management Practices” and a series of “Fact Sheets” were submitted to the TMISC on 7 December 2000. A follow-up workshop was conducted and Technical Memorandum No. 1.3, “Non-Structural Best Management Implementation Plan Activities” was submitted to the TMISC on 31 January 2001.

The consultant team also researched the types of nonstructural BMPs being used successfully in other communities’ stormwater quality programs, especially those applicable to arid regions. A public workshop was conducted and Technical Memorandum No 1.1, “Nonstructural Best Management Practices in Other Communities” was submitted to the TMISC on 1 February 2001.

Based on comments provided by the TMISC members and others at the public workshops, Technical Memorandum No. 1.0, “Best Management Practices (Non-Structural) – Revised” was finalized and submitted to the TMISC on 15 August 2001. This memorandum provides a summarized description of the existing non-structural BMPs (programs, activities and departments) currently implemented by the cities of Reno and Sparks, Washoe County and NDOT. It also describes the water quality related non-structural BMPs used in other similar communities and recommends program development activities to meet the requirements of the NPDES Permit. Technical Memorandum No. 1.0 is provided in Appendix C.

Stormwater Discharge Monitoring –This task commenced with the research, compilation and review of existing surface water quality, flow and weather data collected by various parties in the Truckee Meadows and the evaluation of the data’s usability for the RSQMP. Local public agencies, water purveyors, research and environmental groups have developed a significant database of water quality and flow monitoring data for the Truckee River and its tributaries. The Coordinated Monitoring program is a multi-agency effort, with multiple objectives that include understanding point and non-point source loadings. A series of meetings and interviews and a public workshop addressed the results of this research. Technical Memorandum No 2.0, “Monitoring Plan – Existing Local Monitoring” summarizes this effort and was submitted to the TMISC on 2 November 2001.

The consultant team also identified and compiled a sampling of successful stormwater discharge monitoring programs nationally that could be used as models for the Truckee Meadows stormwater monitoring plan. Following a public workshop, Technical Memorandum No 2.1, “Existing Monitoring Programs in Other Communities” was also submitted to the TMISC on 2 November 2001.

The work on stormwater discharge monitoring also included review and evaluation of the Watershed Analysis Risk Management Framework (WARMF) model developed for the Truckee River watershed. The WARMF model was created to predict daily water quality variation in response to variations in wastewater discharges, water diversions, and return flows. The consultants who developed the WARMF model participated in a meeting to provide information on the capabilities, limitations, value of data, decisions made, objectives, ongoing work, future plans, regulatory issues and the potential for coordination with the stormwater program.

Concurrent with these efforts, a Stormwater Discharge Monitoring Plan was developed for the Truckee Meadows through a series of draft memoranda and public workshops. Technical Memorandum No. 2.2, dated 14 February 2001, describes the approved program in detail (Appendix C). This memorandum was submitted to the TMISC and NDEP at a public workshop on 29 March 2001. The Stormwater Discharge Monitoring Plan was revised and resubmitted by

TMISC to NDEP on 1 May 2001. The plan was approved by NDEP and became effective on 1 July 2001, the beginning of the 2001/2 fiscal year.

The TMISC further refined the monitoring requirements of the NPDES permit to reflect the specific needs in the Truckee Meadows. The priorities defined by the committee were developed in a joint workshop, they are:

- Estimate concentration and loads from representative areas or basins to be used in evaluating overall program effectiveness;
- Evaluate the effectiveness of selected BMPs;
- Identify specific sources of pollution; and
- Identify the degree to which stormwater discharges are impacting selected receiving waters and sediments.

Structural Controls for Water Quality Improvements – Research conducted for this program element included identifying existing structural controls currently in use in the Truckee Meadows and evaluating those used in other communities. Structural controls were divided into two categories of BMPs, temporary construction related BMPs and permanent treatment control BMPs. Research on treatment controls identified the various types of structural devices currently available for stormwater quality enhancement, the pollutants captured and the potential treatment levels that can be expected. Based on this research, recommendations were developed; including a recommended sizing criterion for treatment control BMPs.

Existing structural controls in the Truckee Meadows include limited use of construction related BMPs, a number of drainage control BMPs with some water quality benefits and a limited number of treatment control BMPs designed explicitly for stormwater quality enhancement. Also, the Washoe-Storey Conservation District and some of the local government engineering departments provide erosion control guidance and assistance to site designers and developers, with limited inspection and enforcement.

A draft technical memorandum presented at a public workshop on 29 March 2001 summarized the findings and provided recommendations for programs and activities to meet the NPDES permit requirements. The final version of Technical Memorandum No. 3.0, "Structural Controls for Stormwater Quality Enhancement," dated 15 August 2001, is presented in Appendix C.

Public Education and Participation – The purpose of this task was to identify existing stormwater quality related public education and participation activities used in the Truckee Meadows, those used in other communities and to develop recommendations for the RSQMP. The research included a review of the EPA's Final Rule for Public Education and Outreach and Public Participation Minimum Control Measures for operators of Phase II regulated small municipal separate storm sewer systems. A draft technical memorandum was developed that included a list of potential public outreach activities, a discussion of public involvement and guidelines for implementation of public outreach and participation. Successful public education, awareness and outreach programs and public participation and involvement activities used in other communities were identified based on a series of Fact Sheets developed by the EPA. These Fact Sheets provide information about activities that can be conducted to help reduce negative impacts to water quality. The draft memorandum also provided a list of recommendations for implementation by the TMISC.

The memorandum was presented at a public workshop on 10 May 2001. Based on comments received by the committee members and others during and after the workshop, Technical Memorandum No. 6.0, "Public Education and Participation Element," dated 15 August 2001, was finalized and is presented in Appendix C.

Illegal Discharge Detection and Elimination – This program element is commonly referenced by the acronym IDDE. The purpose of an IDDE program is to identify and eliminate illicit or inappropriate discharges and connections to the municipal storm drain system. IDDE programs in other communities were identified that typically include ordinances and regulations intended to specifically protect the storm drain system and are supported by associated permitting, inspection, monitoring and enforcement efforts. IDDE programs also include components such as public education and outreach, household hazardous waste recycling programs, public reporting, interagency cooperation, staff and resources, and dedicated annual budgets.

The Cities and County all have departments and programs with components that effectively function as IDDE program elements. However, components such as existing codes and ordinances are primarily related to their wastewater pretreatment programs and protection of the sanitary sewer system. At a public workshop on 14 June 2001, a draft technical memorandum presented the existing program elements and ordinances and recommendations for additional activities. In addition, the memorandum provided a model IDDE Stormwater Ordinance. Based on comments received by the committee members and others during and after the workshop, Technical Memorandum No. 4.0, "Illicit Discharge Detection and Elimination (IDDE)," dated 15 August 2001, was finalized and is presented in Appendix C.

Discharges to Storm Drains and Watercourses – Local regulation of discharges from construction and industrial sites and other significant commercial and institutional sources is a required element of the NPDES stormwater permit. The permit requires submittal of a plan and schedule to implement a full regulatory program that will essentially substitute for the current state program. To address this requirement, NDEP's current industrial and construction site discharge permitting program was researched, including the stormwater permit program requirements. Research also included existing local and NDOT programs for regulation of industrial and construction site discharge in the Truckee Meadows. The draft memorandum included recommendations for program development and implementation to fulfill the NPDES permit requirements. Finally, discharge regulation programs in other communities were discussed.

Research of existing programs included identification of existing ordinances, policies and procedures, data management, public education information, staff training, inspection and enforcement, and public reporting procedures. Recommendations and a proposed implementation schedule addressed industrial discharges, IDDE, construction site discharges and post construction programs. In addition, the draft memorandum presented to the TMISC at a public workshop on 24 July 2001 included EPA guidance for the development of a local discharge regulation program, Standard Industrial Classification (SIC) codes and a model Erosion and Sediment Control/Grading Ordinance. This document was revised based on comments received from the committee members and others at the workshop. The final version of Technical Memorandum No. 5.0, "Discharge Regulation to Storm Drains and Watercourses," dated 15 August 2001, is presented in Appendix C.

Section 2: Program Development and Implementation

2.1 Overview

This section describes the actions that the Cities of Reno and Sparks, Washoe County and NDOT will undertake to develop and implement a program to manage urban runoff in their respective jurisdictions. These actions are described in a series of “fact sheets” (Sections 2.2.1 through 2.2.9), which are organized into nine program elements intended to address the requirements of the NPDES permit noted in Section 1.2.2. Table 2-1 presents the nine program elements of the Truckee Meadows RSQMP, the associated acronyms for each element and the corresponding NPDES requirements that will be addressed within each program element.

TABLE 2-1		
Regional Stormwater Quality Management Program Program Elements, Acronyms and NPDES Permit Requirements		
RSQMP Program Elements	Acronyms	NPDES Permit Requirements
Intergovernmental Coordination	IC	Intergovernmental Coordination
Public Outreach	PO	Public Education and Participation
Municipal Operations	MO	Best Management Practices
Stormwater Discharge Monitoring	SWM	Stormwater Discharge Monitoring
Land Use Planning	LU	Best Management Practices
Structural Controls	SC	Structural Controls for Water Quality Improvements
Construction Site Discharge	CSD	Discharges to Storm Drains and Watercourses
Illicit Discharge Detection and Elimination	IDDE	Illicit Discharge Detection and Elimination
Industrial Program	IP	Discharges to Storm Drains and Watercourses

For the RSQMP, each element is broken down into components, which describe the actual activities that the four permittees will undertake to develop and implement each program element. There are twelve potential program components for each element:

- Interlocal Agreement/MOU
- Programmatic
- Regulatory
- Technical Manual
- Training
- Database
- Mapping
- Monitoring
- Complaints Reporting
- Web Site
- Public Outreach
- Special Studies

In some cases a component is included in most of the program elements. For example, all program elements but one have programmatic changes to be implemented (e.g. development of new policies and procedures). In other cases, a component is included in only one element. For example, mapping (of the storm drain system) will be implemented only for Illicit Discharge Detection and Elimination. The fact sheets utilize a coded system, to allow easy reference to the program elements (coded by letters) and the element components (coded by numbers). Table 2-2 presents a master program matrix that matches the acronyms used in the facts sheets and indicates which components will be implemented for each program element.

Table 2-2
Truckee Meadows Regional Stormwater Quality Management Program - Master Program Matrix
Key Program Components in Fact Sheets

Program Elements	Interlocal Agreement/ MOU	Programmatic	Regulatory	Technical Manual	Training	Database	Mapping	Monitoring	Complaints Reporting	Web Site	Public Outreach	Special Studies
Intergovernmental Coordination	IC-1	IC-2										
Public Outreach	IC-1	PO-1							PO-2	PO-3	PO-4	
Municipal Operations	IC-1	MO-1		MO-2	MO-3	MO-4						MO-5
Stormwater Discharge Monitoring	SWM-1	SWM-2		SWM-3	SWM-4	SWM-5		SWM-6		SWM-7	SWM-8	SWM-9
Land Use Planning	IC-1	LU-1	LU-2		LU-3						LU-4	LU-5
Structural Controls	IC-1	SC-1	SC-2	SC-3	SC-4	SC-5			SC-6	SC-7	SC-8	
Construction Site Discharge	IC-1	CSD-1	CSD-2	CSD-3	CSD-4	CSD-5			CSD-6	CSD-7		
Illegal Discharge Detection and Elimination	IC-1	IDDE-1	IDDE-2	IDDE-3	IDDE-4	IDDE-5	IDDE-6		IDDE-7	IDDE-8	IDDE-9	IDDE-10
Industrial Program	IC-1	IP-1	IP-2	IP-3	IP-4	IP-5		IP-6	IP-7	IP-8		

2.2 Program Implementation Fact Sheets

The following fact sheets are organized with a summary cover sheet describing the overall program element and subsequent component sheets. The cover sheet is organized as follows:

- Element description;
- List and summary of components;
- Estimated labor hours to implement each component;
- Indication of joint vs. individual implementation responsibility (i.e. each permittee developing the component independently vs. a jointly funded and developed component);
- A measurable goal for each component; and
- A conceptual long-term implementation schedule.

The component sheets provide the details on how each program component will be developed and implemented, including:

- A detailed description component activities;
- The overall goal of the component;
- An indication of other program activities that are related to the component;
- A description of how the component will be executed; and
- Assumptions governing the estimate of labor hours for the component.

2.2.1 Intergovernmental Coordination

Intergovernmental Coordination (IC)

Truckee Meadows Stormwater
NPDES Permit Implementation



Description: The City of Reno, City of Sparks, Washoe County and the Nevada Department of Transportation (NDOT) will enter into a formal agreement for program development and implementation, including an agreement with NDEP outlining the respective roles and responsibilities for the Construction Site Discharge and Industrial Programs. The City of Reno will hire a Stormwater Coordinator to assist the committee in program implementation.

KEY IC PROGRAM COMPONENTS

1. Interlocal Agreement/MOU

Revise the existing Truckee Meadows Interlocal Stormwater Committee (TMISC) agreement or establish a new agreement for program development and implementation, including cost sharing, joint documents and staffing. Enter into a MOU with NDEP outlining the respective roles and responsibilities for the Construction Site Discharge and Industrial Programs.

2. Programmatic

Hire a Stormwater Coordinator to provide oversight and program management for the development and implementation of all program elements, including public education and outreach and NDEP reporting.

<u>Components</u>	<u>Labor Estimate (hrs)</u>	<u>Responsibility</u>	<u>Measurable Goal</u>
Agreement/MOU	200 hrs	Joint	New Agreement
Programmatic	800 hrs/yr	Individual	Coordinator Hired

Conceptual Long Term Implementation Schedule

<u>Intergovernmental Coordination (IC)</u>	<u>2001/2</u>	<u>2002/3</u>	<u>2003/4</u>	<u>2004/5</u>	<u>2005/6</u>	<u>2006/7</u>
IC-1 Interlocal agreement/MOU						
IC-2 Stormwater Coordinator						

IC - 1 Interagency Agreement/MOU

Detailed Description:

The member agencies of the TMISC will revise the existing interagency agreement or establish a new agreement to address RSQMP program development and implementation. Details on cost sharing, joint documents and staffing will be outlined in the document prepared by the Stormwater Coordinator (IC-2) and reviewed by representative legal counsel.

The new agreement will include the following specific program activities:

- a) Define how NDOT will include structural controls and erosion and sediment control on NDOT facilities and projects within Washoe County (SC and CSD).
- b) Establish a written understanding with NDEP regarding state and local roles and responsibilities for the Construction Site Discharge and Industrial Programs (CSD and IP).
- c) Finalize the agreement for city pretreatment staff inspections on county lands, incorporating inspection for stormwater management and clearly defining enforcement roles (IP).

Goal:

Establish clear roles and responsibilities among the local jurisdictions for program development and implementation. Establish the relationship of the local program to the state program.

Dependencies/Coordination:

This component will precede all others in the RSQMP and will establish parameters for overall program development and implementation.

Execution:

The agreement can be a new interlocal agreement or an addendum to the existing agreement for the TMISC. A draft will be prepared by the Stormwater Coordinator (IC-2) and reviewed by City of Reno legal counsel prior to review and adoption by the committee.

Labor Estimate Assumptions:

The development labor estimate is for Reno staff to draft new language for the revised agreement with input from the committee, followed by review, negotiations, revisions and adoption by all of the agencies.

IC - 2 Programmatic

Detailed Description:

A Stormwater Coordinator will be hired to provide oversight and program management of all RSQMP elements. Responsibilities will include:

- a) Coordination and attendance of TMISC and other meetings.
- b) Drafting a new interagency agreement for the TMISC (IC-1).
- c) Working with existing staff and others to develop policies and procedures for a Public Outreach Program (PO-1). Assist in the development and dissemination of the public education and outreach efforts noted in SWM-8, LU-4, SC-8, and IDDE-9, and IP-1.
- d) Participation in the Health District study noted in MO-5.
- e) Working with agency staff to develop new policies, procedures and ordinances for LU-1, SC-1, CSD-1, IDDE-1 and IP-1.
- f) Participate in a Land Use Planning study (LU-5).
- g) Develop and work with Technical Advisory Committees set up to develop the technical guidance documents noted in SWM-3, SC-3, CSD-3, IDDE-3, and IP-1.
- h) Review documents and prepare and/or review annual reports for NDEP.

Goal:

Provide staff dedicated to the RSQMP. Ensure successful and coordinated program development among the TMISC agencies.

Dependencies/Coordination:

Providing oversight and coordination of the development and implementation of all program elements of the RSQMP, the Stormwater Coordinator will report to the TMISC and organize and attend all committee meetings.

Execution:

The City of Reno, as the lead agency of the TMISC, will hire staff to function as the RSQMP Stormwater Coordinator and support personnel.

Labor Estimate Assumptions:

The annual labor estimate is for a full time Stormwater Coordinator to prepare for and attend meetings, review documents, conduct public outreach efforts, prepare and/or review annual reports and provide ongoing coordination and communication associated with program development.

2.2.2 Public Outreach

Public Outreach (PO)

Truckee Meadows Stormwater
NPDES Permit Implementation



Description: This family of practices is designed to increase public awareness of the RSQMP as a whole, the individual program elements and water quality issues related to stormwater runoff. The Public Outreach Program includes continued and expanded use of existing educational materials and programs (including storm drain stenciling or similar), development of new materials and programs, advertising a complaint/ reporting hotline system developed by the agencies, and the development of a regional web site.

KEY PO PROGRAM COMPONENTS

1. Programmatic

Develop policies and procedures for new and existing programs.

2. Complaints Reporting

Advertise the hotline number and reporting programs.

3. Web Site

Develop a Regional Stormwater Quality Management Program web site.

4. Public Outreach

Develop new public education and outreach programs and materials and expand use of existing programs and materials.

<u>Components</u>	<u>Labor Estimate (hrs)</u>	<u>Responsibility</u>	<u>Measurable Goal</u>
Programmatic	240	Individual	Develop Policies
Complaints Reporting	160	Joint	Advertise Hotline
Web Site	300 dev 60/yr	Joint	Develop Web Site
Public Outreach	960	Joint	Develop Programs

<u>Public Outreach (PO)</u>	<u>2001/2</u>	<u>2002/3</u>	<u>2003/4</u>	<u>2004/5</u>	<u>2005/6</u>	<u>2006/7</u>
IC-1 Interlocal agreement/MOU						
PO-1 Develop policies and procedures						
PO-2 Develop and advertise complaint hotline						
PO-3 Develop web site						
PO-4 Public Outreach						

PO - 1
Programmatic

Detailed Description:

Develop written policies and procedures for the Public Outreach Program for:

- a) Continued use and expansion of existing programs and materials;
- b) Develop new programs and materials; and
- c) Intergovernmental coordination with the other agencies developing parallel programs.

Goal:

Provide clear and defined policies and procedures within each agency to continue and expand public outreach and education activities with a consistent approach within the Truckee Meadows.

Dependencies/Coordination:

Each agency will follow the guidelines developed in the interagency agreement/ MOU (see IC fact sheet) and coordinate public outreach activities with the other jurisdictions.

Execution:

Existing staff within each agency will develop policies specific to their jurisdictions based on the guidelines developed in the interagency agreement/MOU (see IC fact sheet).

Labor Estimate Assumptions:

Labor hours assume the time required to develop the policies required to assure consistent development of public outreach programs within the Truckee Meadows.

PO - 2
Complaints/Reporting

Detailed Description:

Develop and advertise a hotline number and reporting programs so citizens can easily find and know what number to call to report a spill or other water quality related concerns. The number can be advertised by the following methods:

- a) Provide the number and a description of its purpose in bold type in the front of the local phone book;
- b) Provide public service announcements in general print and broadcast media (i.e. newspaper, billboards, television and radio);
- c) List it prominently throughout the Regional Stormwater Quality Management Program web site; and
- d) Consistently provide it on public outreach and educational brochures.

Goal:

Raise public awareness of the hotline number for reporting spills, BMP maintenance needs and other water quality related concerns.

Dependencies/Coordination:

This component is dependent on the development of the other programs that have complaints reporting components (SC-6, CSD-6, IDDE-7, and IP-7). It will be expanded to include routing to the proper department as these other programs are developed.

Execution:

The agencies will jointly develop one hotline number that will be consistently used by all jurisdictions in the Truckee Meadows for all matters related to the Regional Stormwater Quality Management Program and other water quality concerns.

Labor Estimate Assumptions:

The labor estimate involves the development of a unified interagency hotline number and coordination with other agencies to expand the function of the number as the other programs are developed.

PO - 3
Web Site

Detailed Description:

Develop a Regional Stormwater Quality Management Program website to educate the public about the need and requirement to develop and implement a program. It will also provide the backbone for the development and distribution of information as it relates to the program. The web site will continue to grow as the program develops and will contain information including:

- a) Sources of pollutants in stormwater runoff, environmental impacts on receiving waters, Truckee River TMDLs and NPDES permit regulations;
- b) Source controls and BMPs;
- c) The local storm drain system and the Truckee River system;
- d) The emergency spill response/ complaints reporting hotline number;
- e) A description of the individual programs in the overall Regional Stormwater Quality Management Program; and
- f) Links to revised drainage manuals, technical documents and related agencies.

Goal:

Raise public awareness of the Regional Stormwater Quality Management Program and to facilitate information transfer.

Dependencies/coordination:

Not dependant on any other component for initial development. As other program components are completed, information will be added to the web site

Execution:

Currently, the City of Reno has taken the lead on initial development of a regional web site. The agencies should establish what should be included on the website and assign updating responsibilities as the program develops. The website should be designed so that new information can be easily added as it becomes available.

Labor Estimate Assumptions:

The labor estimate involves initial information gathering and web site development. Ongoing labor includes annual updates.

PO - 4
Public Outreach

Detailed Description:

Develop new public education and outreach programs and materials. New programs and materials might include:

- a) New pamphlets and press releases describing the development of the Regional Stormwater Quality Management Program (RSQMP).

Continue and expand use of existing public education and outreach programs, which might include:

- a) Bilingual print and broadcast media presentations about stormwater-related issues and progress on the development of the RSQMP;
- b) Renewed storm drain stenciling or similar programs; and
- c) Additional business and school presentations.

Goal:

Provide a consistent approach at providing public education and outreach activities within each community with the objective of raising public awareness about of the RSQMP and other water quality related issues.

Dependencies/Coordination:

This component will be developed and coordinated with the development of all other programs in the overall Regional Stormwater Quality Management Program.

Execution:

The agencies will choose a list of public outreach activities and decide on a coordinated approach at implementing the programs.

Labor Estimate Assumptions:

Labor hours assume initial time required to develop a list of activities and annual implementation costs.

2.2.3 Municipal Operations

Municipal Operations (MO)

Truckee Meadows Stormwater
NPDES Permit Implementation



Description: The Municipal Operations Program improves existing maintenance activities to better protect water quality, and includes policies, procedures, guidance documents, design criteria, training, database development and studies of street sweeper technologies and practices.

KEY MO PROGRAM COMPONENTS

- | | |
|--|--|
| <p>1. <u>Programmatic</u>
Continue existing programs for catch basin cleaning, ditch cleaning, storm drain line cleaning and street sweeping. Develop policies and procedures to enhance these maintenance activities.</p> <p>2. <u>Technical Manual</u>
Develop design criteria for catch basins that are effective in removing pollutants and easily maintained. Include in revised drainage manuals (See SC-3).</p> | <p>3. <u>Training</u>
Provide training to government staff on new policies and procedures and design criteria.</p> <p>4. <u>Database</u>
Develop procedures for tracking and reporting of maintenance activities.</p> <p>5. <u>Special Studies</u>
Identify more effective technologies and practices for street sweeping, through participation in the Board of Health efforts for fine particulate removal and an evaluation of sweeper technologies and practices for water quality.</p> |
|--|--|

<u>Program Component</u>	<u>Labor Estimate (hrs)</u>	<u>Responsibility</u>	<u>Measurable Goal</u>
Programmatic	320	Indiv. Coordinated	Develop Policies
Technical Manual	(See SC-3)	Joint	Develop Criteria
Training	100	Joint	Train Staff
Database	320 dev 240/yr	Indiv. Coordinated	Develop Database
Special Studies	320	Joint	Participate in Studies

Conceptual Long Term Implementation Schedule

<u>Municipal Operations (MO)</u>	<u>2001/2</u>	<u>2002/3</u>	<u>2003/4</u>	<u>2004/5</u>	<u>2005/6</u>	<u>2006/7</u>
IC-1 Interlocal agreement/MOU						
MO-1 Develop policies and procedures						
MO-2 Develop design criteria for catch basins						
MO-3 Train staff						
MO-4 Develop database						
MO-5 Participate in Health District study*						
MO-5 Evaluate sweeper technologies and practices						
Begin Program						

*schedule is dependent on continuance of program

MO - 1

Programmatic

Detailed Description:

Continue the existing programs for catch basin cleaning, ditch cleaning, storm drain line cleaning and street sweeping. Develop policies and procedures to enhance the effectiveness of these municipal operations.

- a) Prioritize maintenance activities in environmentally sensitive areas:
 - 1) Establish criteria for designation of priority areas; and
 - 2) Develop a schedule for maintenance that addresses designated priority areas.
- b) Develop policies, procedures and guidance manuals for catch basin cleaning, ditch cleaning, storm drain line cleaning and street sweeping specific to water quality. Include:
 - 1) Covered storage of sand/salt;
 - 2) Covered storage of street sweeping and catch basin wastes; and
 - 3) Definition of level of service for each stormwater drainage facility.
- c) Institute changes in street sweeping practices identified through participation in the Washoe County Board of Health street sweeper study (See MO-5).

Goal:

Build upon the existing municipal maintenance activities and to conduct these activities in a manner that protects water quality.

Dependencies/Coordination:

This component will be coordinated with database development (MO-4), in order to ensure that issues critical to managing municipal operations are included in the database.

Execution:

The local jurisdictions will jointly agree on criteria for priority area designation, maintenance policies, procedures and guidance manuals. Each jurisdiction will individually designate priority areas. Coordination with Washoe County Board of Health can utilize one representative from each jurisdiction or one representative from the TMISC. Policies, procedures and guidance can be developed utilizing government staff or a consultant.

Labor Estimate Assumptions:

The estimated labor is for analyzing and revising priorities, and developing policies and procedures for storing materials and instituting changes. It is assumed that existing personnel will conduct street sweeping and storage with no additional labor hours.

MO - 2

Technical Manual

Detailed Description:

The local jurisdictions will:

- a) Develop design criteria for new catch basins that incorporate pollutant removal efficiency and ease of maintenance; and
- b) Incorporate design criteria in revised drainage manuals (see SC-3).

Goal:

Install catch basins that are easily maintained and effective at removing pollutants.

Dependencies/Coordination:

This component will be coordinated with the revision of the drainage design manuals under the Structural Controls Program (see SC-3).

Execution:

The local jurisdictions will jointly evaluate commercial devices and develop design criteria for new catch basin designs or environmental inserts, focusing on pollutant removal effectiveness and ease of maintenance. Existing staff or a consultant can evaluate the basins and propose design criteria. The local jurisdictions will each adopt the design criteria in the new drainage design manual chapters (see SC-3).

Labor Estimate Assumptions:

Labor is included in the revision of the drainage design manuals (SC-3).

MO - 3 Training

Detailed Description:

- a) Provide training to maintenance staff on the new policies and procedures for maintenance activities (MO-1), including:
 - 1) Prioritization based on drainage to environmentally sensitive areas;
 - 2) Scheduling priority maintenance; and
 - 3) Maintenance procedures for the storm drain system.
- b) Include training on the new design criteria for catch basins noted in the revised drainage manuals (See SC-3).

Goal:

Ensure that maintenance activities are conducted in a way that protects water quality.

Dependencies/Coordination:

Training will be implemented following policy and procedure development and adoption (MO-1). Training on catch basin maintenance criteria will be conducted as part of the training component of the Structural Controls Program (SC-4).

Execution:

The staff or consultant that develops the policies and procedures (See MO-1) will provide training to the appropriate government staff from all three jurisdictions. For training on the revised drainage manuals, see SC-4.

Labor Estimate Assumptions:

Labor is for maintenance training. The design revision training is included in SC-4.

MO - 4 Database

Detailed Description:

Each local jurisdiction will institute a database.

- a) Include the following maintenance activities:
 - 1) Catch basin cleaning;
 - 2) Ditch cleaning;
 - 3) Storm drain cleaning; and
 - 4) Street sweeping.
- b) Include the following fields:
 - 1) Type and location of facility;
 - 2) Facility location;
 - 3) Date of maintenance;
 - 4) Estimated quantity and analysis of material removed; and
 - 5) Problem area identification.
- c) Track sand/salt applied for road deicing and compare to sediments removed.

Goal:

Provide a coordinated management system for each jurisdiction, such that maintenance activities occur regularly and results are tracked and can be reported to NDEP.

Dependencies/Coordination:

The database will be developed following policy and procedure adoption (MO-1), in order to ensure that the database includes information critical to program management.

Execution:

Each local jurisdiction will institute a database, and jointly develop summary reports for NDEP.

Labor Estimate Assumptions:

Labor during program development is to develop the database at each agency. Ongoing labor in subsequent years will be to enter data into the database and prepare report material for NDEP.

MO - 5
Special Studies

Detailed Description:

- a) Participate in the Washoe County Board of Health's upgrading of street sweepers and study of alternative deicing methods.
- b) Investigate changes to street sweeping program:
 - 1) Evaluate street sweeper efficiencies and sweeping frequency as related to water quality; and
 - 2) Identify needed program changes and capital equipment purchases.

Goal:

Identify and utilize more effective technologies for street sweeping.

Dependencies/Coordination:

Implementation of this component is dependent on the ongoing efforts of the Board of Health.

Execution:

The local jurisdictions will track, provide comments and coordinate their street sweeping programs with the Board of Health's fine particulate management effort, which includes street sweeper upgrades and a study of alternative deicing methods. Separately, they will conduct an evaluation of street sweeping practices and equipment for the purposes of water quality improvement. Participation in the Board of Health effort will be by existing staff, while the sweeping practices evaluation can be implemented by staff or under contract to a consultant.

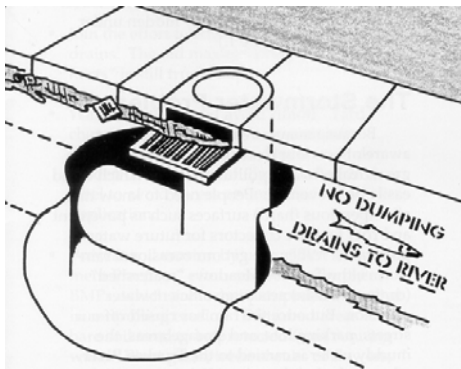
Labor Estimate Assumptions:

Labor is for participation in the Health District's Study and monitoring its recommendations for new equipment. Evaluation of frequency will be limited to the scheduling in MO-1.

2.2.4 Stormwater Discharge Monitoring

Stormwater Discharge Monitoring (SWM)

Truckee Meadows Stormwater
NPDES Permit Implementation



Description: A MOU for intergovernmental coordination, separate from that of the rest of the program, will precede program development and implementation. This program will implement a monitoring program to evaluate the quality of stormwater discharges, the effectiveness of BMPs and the impacts on receiving waters. Program components include an interagency agreement, written policies and procedures, a technical manual, staff training, database tracking, public education and special studies.

KEY SWM PROGRAM COMPONENTS

- | | |
|--|--|
| <p>1. <u>Interlocal Agreement/MOU</u>
Define responsibilities and agree on parallel programs and criteria.</p> <p>2. <u>Programmatic</u>
Develop policies and procedures to determine responsibilities and promote consistency.</p> <p>3. <u>Technical Manual</u>
Establish a technical manual outlining sampling procedures, sampler operation and maintenance, sample analyses, documentation and reporting.</p> <p>4. <u>Training</u>
Train agency staff on policies and procedures outlined in the technical manual.</p> | <p>5. <u>Database</u>
Establish database of monitoring locations, sample results and loading calculations.</p> <p>6. <u>Monitoring</u>
Monitor stormdrain catchments and in-stream monitoring locations specified in the technical manual.</p> <p>7. <u>Web Site</u>
Post and update a map of the monitoring locations and monitoring results.</p> <p>8. <u>Public Outreach</u>
Produce a pamphlet and press releases describing the monitoring program and its purpose.</p> <p>9. <u>Special Studies</u>
Monitor the effectiveness of selected BMPs.</p> |
|--|--|

<u>Program Component</u>	<u>Labor Estimate (hrs)</u>	<u>Responsibility</u>	<u>Measurable Goal</u>
Agreement/MOU	160	Joint	New Agreement
Programmatic	200	Indiv. Coordinated	Policies Developed
Technical Manual	200	Joint	Manual Adopted
Training	100	Joint	Staff Trained
Database	160 dev 360/yr	Joint	Database Developed
Monitoring	160 dev 2,100/yr	Indiv. Coordinated	Monitoring Initiated
Web Site	40	Joint	Web Site Updated
Public Outreach	100	Joint	Program Developed
Special Studies	200 - 1000	Indiv. Coordinated	Studies Initiated

Conceptual Long Term Implementation Schedule

<u>Stormwater Discharge Monitoring (SWM)</u>	<u>2001/2</u>	<u>2002/3</u>	<u>2003/4</u>	<u>2004/5</u>	<u>2005/6</u>	<u>2006/7</u>
SWM-1 Interlocal agreement/MOU						
SWM-2 Develop policies and procedures						
SWM-3 Develop technical manual						
SWM-4 Train staff						
SWM-5 Develop database						
SWM-6 Monitoring						
SWM-7 Place program on web site						
SWM-8 Develop Public Outreach materials						
SWM-9 Special Studies						
Begin Program						

SWM - 1

Interlocal Agreement/MOU

Detailed Description:

The four members will define their responsibilities by entering into an agreement for program development and implementation. The interlocal agreement/MOU will define:

- a) The responsibilities of each jurisdiction in providing staff or contracting a consultant to conduct field sampling and data management activities;
- b) Who will purchase and install auto samplers and SCADA systems and develop a technical guidance manual; and
- c) Responsibilities of the lead agency for SCADA system operation and maintenance, field technician notifications and database management.

Goal:

Establish clear roles and responsibilities among the four jurisdictions for program development and implementation of consistent methodologies and procedures.

Dependencies/Coordination:

This component will precede all others in the Stormwater Discharge Monitoring Program and will establish parameters for further program development and implementation.

Execution:

A new formal interlocal agreement will be established between the local jurisdictions.

Labor Estimate Assumptions:

The labor estimate includes writing an amendment to the existing interlocal agreement for work coordination, division of responsibilities and costs, writing an MOU with NDOT, review and negotiations with each agency's counsel and approval by the governing boards.

SWM - 2 Programmatic

Detailed Description:

Develop and implement written policies and procedures for the Stormwater Discharge Monitoring Program to define:

- a) General tasks and responsibilities of field technicians.
- b) Analytical laboratories that can be used for sample analyses.
- c) SCADA system operation and maintenance, field technician notifications and database management.

Goal:

Clearly define the policies and procedures to be used by field technicians and the lead agency program manager.

Dependencies/Coordination:

This component will be developed concurrently with the establishment of an interlocal agreement/MOU (SWM-1).

Execution:

Existing staff or a consultant will develop policies and procedures that are consistent between the three agencies directly involved in monitoring activities (Reno, Sparks and Washoe County).

Labor Estimate Assumptions:

Labor will be to write the policies and procedures.

SWM - 3

Technical Manual

Detailed Description:

Develop and adopt a detailed technical manual for use by all three jurisdictions to define:

- a) Notification procedures to alert field technicians when samplers have been placed on a “stand-by” status and when samplers have commenced sampling;
- b) Sampling procedures, methodologies and frequencies;
- c) Operation and maintenance of automated samplers and SCADA systems;
- d) Sample analyses, documentation and reporting protocols; and
- e) Data management and load calculation procedures.

Goal:

Provide technical guidance for field technicians and program managers that is consistent among the jurisdictions.

Dependencies/Coordination:

This component will be developed in conjunction with the development of policies and procedures (SWM-2) to ensure that procedures and methodologies are consistent between the three jurisdictions. It will follow the assignment of responsibilities (SWM-1) and the purchase and installation of sampling equipment.

Execution:

Existing staff or a consultant will develop a stormwater discharge monitoring program technical manual for use by all three jurisdictions.

Labor Estimate Assumptions:

Labor is estimated for the creation and review of the technical manual.

SWM - 4 Training

Detailed Description:

Provide training to field technicians and program managers to implement the program per the technical manual.

Goal:

Ensure that field technicians and program managers are familiar with policies and procedures (SWM-2) and the information provided in the technical manual (SWM-3). Ensure that the program is conducted in a consistent manner between the jurisdictions.

Dependencies/Coordination:

Implementation of this component will occur once responsibilities have been defined (SWM-1), policies and procedures have been developed (SWM-2), automated samplers and SCADA systems have been installed and the technical manual has been developed (SWM-3).

Execution:

Existing staff or a consultant will conduct consistent training for all three jurisdictions.

Labor Estimate Assumptions:

Labor is estimated for a total of four field and office training sessions.

SWM - 5 Database

Detailed Description:

Create and maintain a database of monitoring data to:

- a) Record sampler locations, drainage areas, local precipitation and temperature data, dates and times samples were collected, sample results and any other pertinent data;
- b) Track GIS mapping of storm drain networks and land uses within sampled catchments;
- c) Annually analyze sample results, monitor potential trends and calculate the typical pollutant loads associated with specific land uses; and
- d) Provide data to NDEP in annual report.

Goal:

Provide a permanent and accurate archive of the monitoring data for use in assessing the current and potential future quality of stormwater discharges in the Truckee Meadows.

Dependencies/Coordination:

Data will be collected by trained staff for each jurisdiction or a consultant and will be compiled in a consistent format for presentation to the lead agency. The database will also be provided to the Regional Coordinated Monitoring Program.

Execution:

This component will be developed and archived by the lead agency as the monitoring data becomes available.

Labor Estimate Assumptions:

Labor during development will include creation of the database and mapping the sampling areas. Ongoing labor will include input and archiving data.

SWM - 6 Monitoring

Detailed Description:

Monitor storm drain catchments and in-stream monitoring locations per the procedures, methodologies and frequency specified in the technical manual (SWM-3).

- a) Program managers will alert field technicians when samplers have been placed on "stand-by" status and again when samplers have commenced sample collection.
- b) Samples will be analyzed for the parameters noted in the technical manual (SWM-3).
- c) A minimum 10-day dry period will be required prior to the collection of subsequent stormwater samples.
- d) Operation and maintenance of samplers and SCADA systems will be conducted per the procedures outlined in the technical manual.

Goal:

Initiate monitoring of stormwater discharges, consistent with the policies and procedures of SWM-2 and guidance provided in the technical manual (SWM-3).

Dependencies/Coordination:

Implementation of this component will occur once training has been completed.

Execution:

Existing staff or a consultant will conduct monitoring activities.

Labor Estimate Assumptions:

Development labor is for installation of samplers. Ongoing labor includes a maximum of 1,500 hours/ year of storm drain catchment sampling and sampler servicing and 600 hours/year of Truckee River and playa lake in-situ grab sampling. Samples will be collected for a period of three years.

Technical Memorandum 2.2 (See Appendix C) outlines the parameters for the Stormwater Discharge Monitoring Plan for the permittees. This plan was approved by the NDEP and became effective on July 1, 2001. The plan provides the following:

- a) Proposed monitoring locations (7 catchments and 5 in-stream locations);
- b) Land use characteristic of the proposed monitored catchments;
- c) Proposed monitoring methodology and sampling frequency;
- d) Constituents to be analyzed;
- e) A discussion about data analysis and loading calculations; and
- f) Annual report requirements.

SWM - 7

Web Site

Detailed Description:

Provide general information about the Stormwater Discharge Monitoring Program (numbers, types, and locations of samplers and SCADA systems) and access to historical database of monitoring data on the RSQMP web site.

Goal:

Provide ready access to interested parties for all aspects of the Stormwater Discharge Monitoring Program.

Dependencies/Coordination:

This component is more fully described under PO-3. General information will be posted once samplers and SCADA systems are installed and monitoring has commenced. Updates of historical monitoring data will occur in the year preceding the submittal of the annual report.

Execution:

The jurisdictions will jointly establish a web site for the RSQMP (See PO-3).

Labor Estimate Assumptions:

Labor is for an add-on to the web site developed and maintained under PO-3.

SWM - 8
Public Outreach

Detailed Description:

Produce a pamphlet and periodic press releases, which briefly describe the monitoring program, its purpose, and the monitoring equipment in use. The web site will also be identified in the pamphlet and all press releases.

Goal:

Broadly distribute information about the need and purpose of a Stormwater Discharge Monitoring Program.

Dependencies/Coordination:

This component should be developed in conjunction with the web site (SWM-7) and press releases should be jointly reviewed by the local jurisdictions.

Execution:

Existing staff or a consultant will prepare the pamphlet and press releases for review and distribution by the appropriate local agency.

Labor Estimate Assumptions:

Labor is to create the pamphlet text and graphics and six publicity releases.

SWM - 9
Special Studies

Detailed Description:

Conduct special studies to monitor the effectiveness of structural and non-structural BMPs.

Goal:

Assist jurisdictions in the selection of the most cost effective BMPs for reducing pollutants in stormwater to the MEP.

Dependencies/coordination:

This component may be developed late in the NPDES permit term if additional data is needed to determine the most cost effective BMPs for local conditions.

Execution:

Existing staff or a consultant will design special studies if requested by program managers.

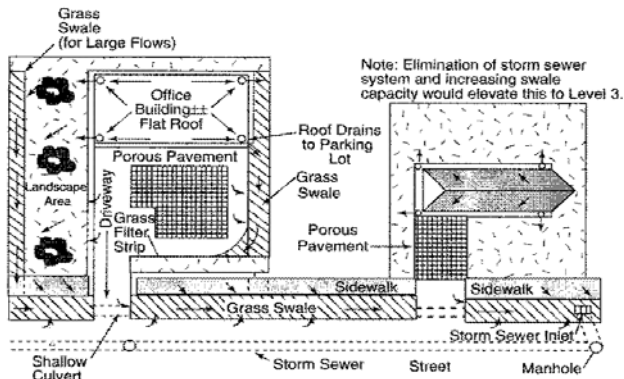
Labor Estimate Assumptions:

Labor depends on the number of BMPs and the scope of the study.

2.2.5 Land Use Planning

Land Use Planning (LU)

Truckee Meadows Stormwater
NPDES Permit Implementation



Description: The Land Use Planning set of BMPs builds on a study conducted to evaluate land use planning techniques and educational methods. That study will identify needed changes for programs, policies and procedures, ordinances, training and public outreach.

KEY LU PROGRAM COMPONENTS

1. **Programmatic**
Institute programs, including written policies and procedures, for land use planning methods that reduce runoff and protect water quality, based on research conducted under LU-5.
2. **Regulatory**
Develop and adopt ordinance changes for those land use planning techniques identified under LU-5.
3. **Training**
Provide training for government staff on new program and ordinances adopted under LU-1 and LU-2.
4. **Public Outreach**
Develop and provide public outreach on programs, methods and ordinances adopted under LU-1 and LU-2.
5. **Special Studies**
Evaluate land use planning methods to reduce urban runoff and protect water quality. Investigate other communities' land use programs for design, implementation and outreach techniques.

<u>Program Component</u>	<u>Labor Estimate (hrs)</u>	<u>Responsibility</u>	<u>Measurable Goal</u>
Programmatic	600 dev 4,000/yr	Indiv. Coordinated	Develop Policies
Regulatory	600	Indiv. Coordinated	New Ordinances
Training	160	Joint	Train Staff
Public Outreach	240	Joint	Develop Program
Special Studies	500	Joint	Initiate Studies

<u>Land Use Planning (LU)</u>	<u>2001/2</u>	<u>2002/3</u>	<u>2003/4</u>	<u>2004/5</u>	<u>2005/6</u>	<u>2006/7</u>
IC-1 Interlocal agreement/MOU						
LU-1 Develop policies and procedures						
LU-2 Revise ordinances						
LU-3 Train Staff						
LU-4 Public Outreach						
LU-5 Evaluate planning and outreach techniques						
Begin program						

LU - 1 Programmatic

Detailed Description:

Based on research conducted under LU-5, the local jurisdictions will institute programmatic changes (including written policies and procedures) for the implementation of land use planning methods to reduce site runoff and protect water quality. Programs identified under LU-5 could include:

- a) Mechanisms for modifying project densities (e.g. transfer of development rights, planned unit developments);
- b) Site design requirements (e.g. riparian setbacks, calculation of impervious coverage); and
- c) Land conservation tools (e.g., conservation easements, deed restrictions).

Goal:

Institute changes in local government programs to facilitate development practices that reduce runoff and protect water quality.

Dependencies/Coordination:

This component will be developed based on the evaluation of land use planning techniques identified under LU-5. Program development will be coordinated with Structural Controls Program (SC-1) and Construction Site Discharge Program (CSD-1) to ensure that site design methods are consistent.

Execution:

Following the analysis conducted under LU-5 the local jurisdictions will jointly develop and adopt policies, procedures and programs appropriate to the Truckee Meadows.

Labor Estimate Assumptions:

The programmatic labor is for each agency to provide review and adoption in the development stage. The program will require review and updates at a 10-year interval. Ongoing annual labor is estimated for plan review, inspections and enforcement.

LU - 2
Regulatory

Detailed Description:

Develop and adopt ordinance changes for those land use planning techniques identified under LU-5.

Goal:

Institute land use planning methods in local land use regulation to reduce runoff and protect water quality.

Dependencies/Coordination:

This component will be based on the research conducted under LU-5 and programs chosen for adoption under LU-1. This component will also be coordinated with the regulatory changes developed under SC-2 and CSD-2.

Execution:

Local jurisdictions will develop and adopt ordinance changes based on programs jointly identified under LU-1.

Labor Estimate Assumptions:

The labor estimate is a total of all three municipal agencies to revise their respective ordinances.

LU - 3 Training

Detailed Description:

Provide training to government planning and community development staff on the programs (including policies and procedures) and ordinances adopted under LU-1 and LU-2.

Goal:

Ensure that government staff is familiar with the new land use planning programs and ordinances.

Dependencies/Coordination:

Implementation of this component takes place after ordinance and program adoption. Land use training will be coordinated with other new development training efforts, SC-4 and CSD-4.

Execution:

Personnel developing the programs and ordinances (either community development staff or a consultant) will provide training to the appropriate government staff from all three jurisdictions. If the development of public outreach (LU-4) identifies designer/developer training as an appropriate delivery method, that effort can be integrated into government training.

Labor Estimate Assumptions:

Labor estimate includes staff time or consultant time to develop and conduct two workshops for each of the three agencies and two for the development community, a total of eight workshops.

LU - 4
Public Outreach

Detailed Description:

Develop and provide public outreach on programs, methods and ordinances adopted under LU-1 and LU-2. Identification of audience, medium and message will be determined under LU-5.

Goal:

Provide information and develop support for programs and methods for land use planning that protect water quality.

Dependencies/Coordination:

Public outreach will be dependent on the programs, methods and ordinances adopted under LU-1 and LU-2. The investigation of other communities' outreach methods (see LU-5) will provide guidance for executing the outreach, including identification of audience, medium and message.

Execution:

Once the special study is completed under LU-5, the outreach program will identify target audiences, delivery methods and information to be conveyed. Community development staff or a consultant can execute the program.

Labor Estimate Assumptions:

Labor is to create a pamphlet and six publicity releases.

LU - 5 Special Studies

Detailed Description:

The local jurisdictions will:

- a) Evaluate land use planning methods and policies that address runoff reduction and water quality improvement and recommend a suite of measures for implementation, including, at a minimum:
 - 1) Mechanisms for modifying project densities (e.g. transfer of development rights, planned unit developments);
 - 2) Site design requirements (e.g. riparian setbacks, calculation of impervious coverage); and
 - 3) Land conservation tools (e.g., conservation easements, deed restrictions).
- b) Investigate other communities' land use planning programs for:
 - 1) Development design techniques that protect water quality; and
 - 2) Public outreach methods on encouraging design to protect water quality.

Goal:

Appropriate land use planning tools for use in the Truckee Meadows.

Dependencies/Coordination:

This component is the foundation for programmatic, regulatory and public outreach efforts (see LU-1, LU-2 and LU-4).

Execution:

This component will be conducted jointly by the local jurisdictions. Staff from local community development departments or a consultant can conduct the research and prepare recommendations. Background research will include web/document analysis and interviews.

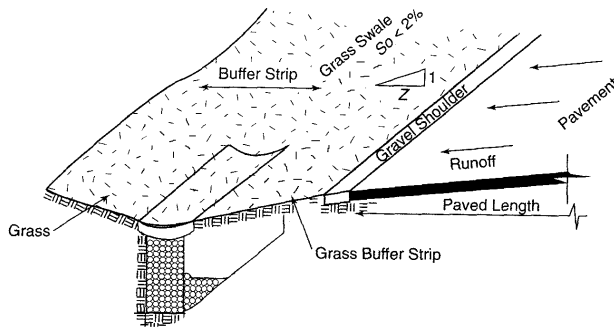
Labor Estimate Assumptions:

Labor is estimated for staff or a consultant to research and develop program recommendations.

2.2.6 Structural Controls

Structural Controls (SC)

Truckee Meadows Stormwater
NPDES Permit Implementation



Description: The Structural Controls Program will implement structural BMPs for new development and significant redevelopment. Program components are policies and procedures, ordinance revision, drainage manual revision, training for staff, project designers and developers, database tracking, complaints reporting and public education on BMPs.

KEY SC PROGRAM COMPONENTS

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. <u>Programmatic</u>
Develop policies and procedures for plan review, inspection, maintenance and enforcement. Establish inspection program. 2. <u>Regulatory</u>
Adopt new stormwater management ordinances requiring BMPs on new development and authorizing inspection and enforcement of BMP maintenance. 3. <u>Technical Manual</u>
Establish new chapter in drainage design manuals to incorporate BMPs. Provide maintenance guide. 4. <u>Training</u>
Train staff on new policies and procedures and drainage manual revisions. Provide seminar to project designers and developers on BMP design and policy implementation. | <ol style="list-style-type: none"> 5. <u>Database</u>
Establish database of installed structural BMPs and use to prioritize inspections. 6. <u>Complaints Reporting</u>
Update the complaint system for reporting of structural BMP problems. 7. <u>Web Site</u>
Post revisions to drainage manuals, BMP maintenance guide and complaint contact information on the web site. 8. <u>Public Outreach</u>
Produce a pamphlet describing the types and functions of structural BMPs. |
|--|---|

<u>Program Component</u>	<u>Labor Estimate (hrs)</u>	<u>Responsibility</u>	<u>Measurable Goal</u>
Programmatic	240	Indiv. Coordinated	New Ordinances
Regulatory	320	Indiv. Coordinated	Policies Developed
Technical Manual	760	Joint	Manual Adopted
Training	160	Joint	Staff Trained
Database	100 dev 100/yr	Indiv. Coordinated	Database Developed
Complaints Reporting	60 dev 60/yr	Indiv. Coordinated	Hotline Modified
Web Site	40	Joint	Web Site Updated
Public Outreach	100	Joint	Program Developed

Conceptual Long Term Implementation Schedule

Structural Controls (SC)	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7
IC-1 Interlocal agreement/MOU						
SC-1 Develop policies and procedures						
SC-2 Revise ordinances						
SC-3 Revise drainage manuals						
SC-4 Train staff and site designers/developers						
SC-5 Develop database						
SC-1 Establish inspection and enforcement program						
SC-6 Modify complaint hotline						
SC-7 Place program on web site						
SC-8 Develop maintenance guide and PO materials						
Begin program						

SC - 1 Programmatic

Detailed Description:

Develop and implement written policies and procedures for the Structural Controls Program.

- a) For plan review, including water quality performance criteria and design standards for structural BMPs.
- b) For inspection of BMPs on private property, such as entry procedures and inspection frequency.
- c) Establish requirements for long-term maintenance and enforcement mechanisms for maintenance.
- d) Develop guidance to project designers and developers and BMP owners, such as:
 - 1) A checklist on plan submittal requirements; and
 - 2) A BMP maintenance guide, which identifies maintenance frequencies and includes a checklist outlining typical maintenance activities.
- e) Develop and execute an inspection and enforcement program for structural controls.

Goal:

Provide written guidance to local government staff, project designers, developers and BMP owners regarding the design, operation and maintenance of structural controls and to establish a program for the regular inspection of structural controls.

Dependencies/Coordination:

Local jurisdictions will need to ensure that new policies and procedures implement the revised ordinances (SC-2) and are consistent with the revised drainage design manuals (SC-3). All components of this program will be developed concurrently with the Construction Site Discharge Program (CSD) and Land Use Planning Program (LU).

Execution:

Policies and procedures will be developed in conjunction with development and adoption of the revised ordinances and drainage manuals. Existing staff will be responsible for ensuring consistency with other agency policies and adoption by the appropriate agency.

Labor Estimate Assumptions:

The programmatic labor is for each agency to provide review and adoption in the development stage. The program will require review and updates at a 5-year interval.

SC - 2 Regulatory

Detailed Description:

Adopt a new stormwater management ordinance chapter that includes legal authority to require BMPs in new development, inspect privately owned BMPs and require maintenance or repair, when necessary. The legal authority will:

- a) Require that new site plans include structural BMPs;
- b) Adopt design standards by reference to technical documents;
- c) Require perpetual maintenance of structural BMPs;
- d) Establish the right of program staff to enter private property and inspect BMPs;
- e) Establish the authority to require maintenance and/or repairs; and
- f) Establish enforcement remedies.

Goal:

Provide clear authority to the local jurisdictions for the implementation of a Structural Controls Program.

Dependencies/Coordination:

Revision of ordinances will take place in conjunction with policy and procedure revisions (SC-1) and revision of the local drainage design manuals (SC-3). Structural controls ordinance adoption will occur concurrently with construction site discharges ordinance adoption (CSD-2) and land use planning ordinance adoption (LU-2).

Execution:

Existing staff will prepare ordinance revisions to be adopted by the appropriate governing bodies.

Labor Estimate Assumptions:

The labor estimate is a cumulative total of all three municipal agencies to revise their respective ordinances.

SC - 3

Technical Manual

Detailed Description:

Develop a new chapter in existing drainage design manuals that:

- a) Provides technical guidance on structural controls for stormwater quality, including selection, design, operation and maintenance;
- b) Provides design criteria for new catch basins as outlined in MO-2;
- c) Includes policies and procedures identified under SC-1;
- d) Establishes water quality performance criteria for permanent treatment control BMPs; and
- e) Includes a section regarding local variation in submittal and design requirements (e.g. setbacks).

Goal:

Provide technical guidance for project designers and developers on BMP selection, design and maintenance that is consistent among the jurisdictions.

Dependencies/Coordination:

This component will be developed in conjunction with ordinance changes (SC-2) and policy and procedure changes (SC-1) to ensure that all program components are consistent. Development of the new drainage manual chapter will occur concurrently with the Construction Activities BMP Handbook update (CSD-3) and catch basin design criteria development (MO-2).

Execution:

The local jurisdictions will jointly oversee development of the chapter under contract and each will adopt the chapter into their existing drainage design manual.

Labor Estimate Assumptions:

The labor estimate is for creation of a new drainage manual chapter by a consultant.

SC - 4 Training

Detailed Description:

Provide training to member agency staff, project designers and developers.

- a) Train plan review staff on BMP design standards and the revised drainage design manuals.
- b) Train staff on the inspection and enforcement programs, incorporating the revised drainage design manuals as standards.
- c) Provide a one-day training seminar for the development community on BMP design and policy implementation. The seminar will outline structural BMPs appropriate for the area, design criteria and maintenance responsibilities.
- d) Provide training to personnel answering complaints so complaints are transferred to the appropriate department and are resolved in a timely manner (See SC-6).

Goal:

Ensure that government staff, project designers and developers are familiar with the policies, procedures and technical guidance provided in the revised drainage design manuals.

Dependencies/Coordination:

Implementation of this component takes place after ordinance adoption, policy and procedure adoption and drainage manual revision and adoption.

Execution:

The consultant revising the drainage manuals will provide training to the appropriate member agency staff, as well as project designers and developers.

Labor Estimate Assumptions:

Labor estimate includes staff or consultant time to develop and conduct two workshops for the four agencies and two for the development community, a total of four workshops.

SC - 5 Database

Detailed Description:

Create and maintain a database of permanent structural BMPs.

- a) Locate structural BMPs associated with new development and significant redevelopment on a GIS.
- b) Track basic information regarding BMP location, type and ownership, as well as inspection dates, maintenance needs, complaints and enforcement.
- c) Use the database to prioritize BMP inspections.
- d) As resources allow, add existing stormwater quality BMPs and flood control facilities to the database.

Goal:

Provide a coordinated management system for each jurisdiction, such that appropriate maintenance is provided for each structural BMP.

Dependencies/Coordination:

This component will be developed as policies and procedures are developed (SC-1), ordinances are adopted (SC-2), and drainage design manual revisions (SC-3) near completion, so that the database will include information important to ensuring compliance with the program. Each jurisdiction will need an existing GIS in order to implement this component.

Execution:

Structural BMP information for new development can be required by agencies as part of the development review process. This information can be provided in a format that is imported into the local government GIS.

Labor Estimate Assumptions:

Labor during development is to set up the database in GIS at each agency. Ongoing labor in subsequent years will be for data entry.

SC - 6

Complaints Reporting

Detailed Description:

Facilitate public reporting of structural control BMP problems by:

- a) Identifying contact information on the Regional Stormwater Quality Management Program web site (SC-7) and in materials distributed to BMP owners and the public (SC-8).
- b) Tracking complaints and complaint resolution through a database.
- c) Providing training to personnel answering complaints so the complaints are transferred to the appropriate department and are resolved in a timely manner.

Goal:

Enhance compliance with the program by ensuring that the public can easily report suspected problems with structural controls (e.g. need for maintenance).

Dependencies/Coordination:

This component will be developed in conjunction with the complaints reporting system developed for the Construction Site Discharge program (See CSD-6).

Execution:

Each jurisdiction will establish a primary number for complaint reporting and provide guidance to personnel for routing calls.

Labor Estimate Assumptions:

This will be an add-on to the complaints reporting system developed for the Construction Site Discharge program (CSD-6).

SC - 7
Web Site

Detailed Description:

Provide information on structural controls on the regional web site.

- a) Post the revised drainage design manuals on the web site and include checklists for plan submittal. Also include photographs and drawings of typical structural control types and common installations.
- b) Post the BMP maintenance guidance material on the web site [See SC-1 (d2)].
- c) Post the complaints contact number on the web site.

Goal:

Provide ready access to interested parties for all aspects of the Structural Controls Program.

Dependencies/Coordination:

This component is more fully described under PO-3. Posting of the drainage manuals will occur once the manuals are complete and adopted (see SC-3). Posting of the complaints contact number will take place after the complaints reporting system is established (see SC-6).

Execution:

The jurisdictions will jointly establish a web site for the Regional Stormwater Quality Management Program (see PO-3).

Labor Estimate Assumptions:

Labor is for an add-on to the web site developed and maintained under PO-3.

SC - 8
Public Outreach

Detailed Description:

Provide information to the public on structural controls through:

- a) A pamphlet describing the various types and functions of structural controls, proper maintenance and when to report problems; and
- b) Press releases on development and implementation of the Structural Controls Program.

Goal:

Broadly distribute information about the need and function of structural controls designed for stormwater quality enhancement.

Dependencies/Coordination:

This component should be developed in conjunction with the web site (SC-7) and press releases should be jointly reviewed by the local jurisdictions.

Execution:

Existing staff or a consultant will prepare the pamphlet and press releases for review and distribution by the appropriate local agency.

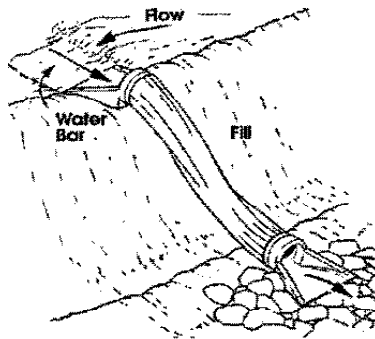
Labor Estimate Assumptions:

Labor is to create pamphlet text and graphics and six publicity releases.

2.2.7 Construction Site Discharge

Construction Site Discharge (CSD)

Truckee Meadows Stormwater
NPDES Permit Implementation



Temporary Flexible Pipe Slope Drain

Description: This program will integrate stormwater management into the existing regulatory program for grading permit plan review. Stormwater Pollution Prevention Plans (SWPPPs) and inspections will be required with potential enforcement for non-compliance. Program components are written policies and procedures, ordinance revision, a revised Construction Activities BMP Handbook, training for staff and site designers and operators, a database, complaints reporting and web site information.

KEY CSD PROGRAM COMPONENTS

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. <u>Programmatic</u>
Develop policies and procedures for plan review, inspection and enforcement. Utilize existing grading permit staff for implementation. 2. <u>Regulatory</u>
Adopt new stormwater management chapter that includes construction site discharge. 3. <u>Technical Manual</u>
Update and adopt Construction Activities BMP Handbook. 4. <u>Training</u>
Train plan review, inspection and enforcement staff on handbook and construction site waste management BMPs. Train site designers and operators. | <ol style="list-style-type: none"> 5. <u>Database</u>
Establish and use database for program management, including tracking BMPs, inspections, enforcement, complaints and complaint response. 6. <u>Complaints Reporting</u>
Update the complaints system for reporting of construction site discharge problems. 7. <u>Web Site</u>
Post BMP handbook and complaint contact information on the web site. |
|--|---|

<u>Program Component</u>	<u>Labor Estimate (hrs)</u>	<u>Responsibility</u>	<u>Measurable Goal</u>
Programmatic	320	Indiv. Coordinated	Policies Developed
Regulatory	180	Indiv. Coordinated	New Ordinances
Technical Manual	600	Joint	Manual Adopted
Training	160	Joint	Staff Trained
Database	160 dev 300/yr	Indiv. Coordinated	Database Developed
Complaints Reporting	60 dev 120/yr	Indiv. Coordinated	Hotline Modified
Web Site	40	Joint	Web Site Updated

Conceptual Long Term Implementation Schedule

Construction Site Discharge (CSD)	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7
IC-1 Interlocal agreement/MOU						
CSD-1 Develop policies and procedures						
CSD-2 Revise ordinances						
CSD-3 Update Construction Activities BMP Handbook						
CSD-4 Train staff and site designers/operators						
CSD-5 Modify or create database						
CSD-6 Modify complaint hotline						
CSD-7 Place program on web site						
Begin program						

Component Details

CSD - 1 Programmatic

Detailed Description:

Develop written policies and procedures for the construction site discharge program.

- a) The policies should address inspections, enforcement and plan review. Include the policies and procedures into the revised Construction Activities BMP Handbook and adopt it.
- b) Establish threshold for requiring stormwater pollution prevention plans on new development, at a minimum, one acre or more of land-disturbance.
- c) Utilize existing grading permit review staff for plan review, inspection and enforcement.

Goal:

Provide written guidance to local government staff and project designers and construction site operators regarding the implementation of construction site regulation by the local jurisdictions.

Dependencies/Coordination:

Local jurisdictions will need to ensure that the policies and procedures implement the revised ordinances (CSD-2) and are consistent with the regional Construction Activities BMP Handbook (CSD-3). All components of this program will be developed concurrently with the Structural Controls Program (SC) and Land Use Planning Program (LU).

Execution:

Policies and procedures will be developed under contract and in conjunction with development and adoption of the revised ordinances and BMP handbook. Existing staff will be responsible for ensuring consistency with other agency policies and ensuring adoption by the appropriate governing body.

Labor Estimate Assumptions:

The programmatic labor is for each agency to provide review and adoption in the development stage. The program will require review and updates at a 10 to 20-year interval.

CSD - 2 Regulatory

Detailed Description:

Adopt a new stormwater management ordinance chapter that:

- a) Establishes a performance standard for discharges from construction sites.
- b) Requires stormwater pollution prevention plan approval prior to land disturbance. The SWPPP will include waste management BMPs as well as erosion and sediment control measures.
- c) Establishes a threshold for requiring SWPPPs, at a minimum, one acre.
- d) Requires compliance with the plan.
- e) Specifies plan submittal requirements.
- f) Requires financial guarantees for compliance and final site stabilization.
- g) Refers to the Construction Activities BMP Handbook for design guidance and standards for developing the SWPPP (see CSD-4).
- h) Requires construction site operators to control construction site wastes that could adversely impact water quality; and
- i) Outlines enforcement mechanisms.

Goal:

Provide clear authority to the local jurisdictions for the implementation of a Construction Site Discharge Regulation Program.

Dependencies/Coordination:

Revision of ordinances will take place in conjunction with policy and procedure revisions (CSD-1) and revision of the Construction Activities BMP handbook (CSD-3). Construction site discharge ordinance adoption will occur concurrently with structural controls ordinance adoption (SC-2) and land use planning ordinance adoption (LU-2).

Execution:

Existing staff will prepare ordinance revisions to be adopted by the appropriate governing bodies.

Labor Estimate Assumptions:

The labor estimate is a cumulative total of all three municipal agencies to revise their respective ordinances.

CSD - 3

Technical Manual

Detailed Description:

Revise and update the existing Construction Activities BMP Handbook (draft, 1994) to guide staff, project designers and construction site operators in managing stormwater pollution. The handbook will:

- a) Include the policies and procedures identified under CSD-1;
- b) Establish a procedure and provide standards for preparation of construction site SWPPPs;
- c) Provide a checklist for designers and operators to use in developing SWPPPs, including plan components and construction site waste management measures;
- d) Reflect the most appropriate and current erosion and sediment control measures, including design, installation and maintenance requirements;
- e) Be referenced through ordinance or codes as set guidelines and standards; and
- f) Reflect performance standards identified in the ordinance language.
- g) Identify regulatory differences between agencies, if they exist.

Goal:

Provide technical guidance for staff, project designers and construction site operators on SWPPP preparation and BMP selection, design and maintenance. To ensure that the BMPs utilized meet the EPA standards of BAT/BCT.

Dependencies/Coordination:

This component will be developed in conjunction with policy and procedure changes (CSD-1) and ordinance changes (CSD-2) to ensure that all program components are consistent. The Construction Activities BMP Handbook update will occur concurrently with the structural controls drainage manual revisions (SC-3).

Execution:

The local jurisdictions will jointly oversee revision of the handbook by a consultant and each will adopt the handbook.

Labor Estimate Assumptions:

The labor estimate is for the update and finalization of the regional Construction Activities BMP Handbook by a consultant.

CSD - 4 Training

Detailed Description:

Provide training to government staff, project designers and construction site operators.

- a) Train plan review staff on BMP handbook and SWPPP review.
- b) Train inspection staff on BMP handbook and procedures for inspection and enforcement.
- c) Conduct half-day seminar for project designers and construction site operators on:
 - 1) The new local government role on construction site discharge regulation, including program policies and administration;
 - 2) Preparing a SWPPP;
 - 3) The design, installation and maintenance of erosion and sediment control measures; and
 - 4) Construction site waste management practices.
- d) Conduct one-on-one training at construction sites as necessary.

Goal:

Ensure that government staff, project designers and construction site operators are familiar with policies, procedures and technical guidance provided in the Construction Activities BMP Handbook.

Dependencies/Coordination:

Implementation of this component takes place after policy and procedure adoption (CSD-1), ordinance revision (CSD-2) and handbook adoption (CSD-3).

Execution:

The consultant preparing the handbook will provide training to the appropriate government staff from all three jurisdictions, as well as project designers and construction site operators.

Labor Estimate Assumptions:

Labor estimate includes staff time or consultant time to develop and conduct two workshops for the four agencies, two for the development community and two on-site trainings, a total of six workshops.

CSD - 5 Database

Detailed Description:

Utilize a database to manage the Construction Site Discharge Program.

- a) Incorporate the following elements into the existing tracking system for grading permits (or create a new database):
 - 1) Location and permit number;
 - 2) SWPPP Best Management Practices used;
 - 3) Inspections;
 - 4) Construction site related complaints; and
 - 5) Enforcement.
- b) Use the database to set and prioritize inspections.
- c) Incorporate information into spatial GIS to track inspections.

Goal:

Provide a coordinated management system for each jurisdiction, such that SWPPP and permit actions (e.g. BMP installation, inspections, enforcement) are tracked for project management and can be summarized for NDEP.

Dependencies/Coordination:

This component will be developed as ordinance adoption, policy and procedure revisions and BMP handbook adoption near completion, so that the database will include information important to ensuring compliance with and management of the program.

Execution:

Each jurisdiction will contract to update their permit database (or establish a new database). Alternatively, if the database is configured such that the information is easily incorporated, existing staff can complete this component.

Labor Estimate Assumptions:

Labor during development is to set up the database in GIS at each agency. Ongoing labor in subsequent years will be to enter data into the database.

CSD - 6 Complaints Reporting

Detailed Description:

Facilitate public reporting of construction site discharge problems by:

- a) Providing contact information in the local Construction Activities BMP Handbook and on the Regional Stormwater Quality Management Program web site.
- b) Enhancing the current complaint and reporting system to include construction site discharge complaints.
- c) Provide training for personnel answering complaints to ensure that complaints are addressed in a timely manner by the appropriate personnel.
- d) Track construction site discharge complaints and resolutions.

Goal:

Enhance compliance with the program by ensuring that the public can easily report suspected discharges from construction sites and that complaints will be responded to.

Dependencies/Coordination:

This component should be developed in conjunction with the Structural Controls Program database (see SC-5).

Execution:

Each jurisdiction will establish a primary number for complaint reporting and provide guidance to personnel for routing calls.

Labor Estimate Assumptions:

Labor is to train personnel and improve advertising of the complaint lines.

CSD - 7 Web Site

Detailed Description:

Post the following components of the CSD Program on the Regional Stormwater Quality Management Program web site (see PO-3):

- a) The revised and adopted Construction Activities BMP Handbook; and
- b) The complaint contact number.

Goal:

Provide ready access to interested parties for all aspects of the Construction Site Discharge Program.

Dependencies/Coordination:

The web site is more fully described under PO-3. Posting of the BMP handbook will occur once the handbook is complete and adopted (see CSD-3). Posting of the complaint contact number will take place after the complaints reporting system is established (see CSD-6).

Execution:

The jurisdictions will jointly establish a web site for the Regional Stormwater Quality Management Program (see PO-3) and finalized information for the CSD Program will be added to the web site.

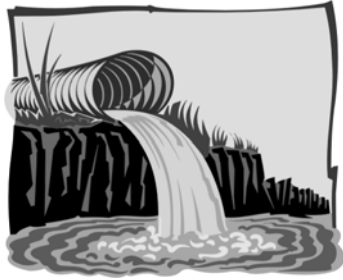
Labor Estimate Assumptions:

Labor is for an add-on to the web site developed and maintained under PO-3.

2.2.8 Illicit Discharge Detection and Elimination

Illicit Discharge Detection and Elimination (IDDE)

Truckee Meadows Stormwater
NPDES Permit Implementation



Description: This effort formalizes a program for detecting and eliminating illicit discharges and connections, and includes adoption of policies and procedures, ordinance revisions, technical manual adoption, training, a database, storm drain mapping, complaints reporting, web site information, public outreach and development of a household hazardous waste (HHW) disposal program.

KEY IDDE PROGRAM COMPONENTS

1. **Programmatic**
Institute an inspection and enforcement program, including adoption of policies and procedures.
2. **Regulatory**
Adopt ordinances for the implementation of an IDDE program.
3. **Technical Manual**
Adopt a manual for an IDDE program, including guidance for inspection methods.
4. **Training**
Provide training for staff on IDDE policies and procedures in manual.
5. **Database**
Utilize database for tracking illegal discharges, spill response, and reporting.
6. **Mapping**
Complete detailed storm drain mapping.
7. **Complaints Reporting**
Update the complaints system for reporting spills, illegal connections and unusual outfall discharges.
8. **Web Site**
Place educational material and complaint contact number on the web site.
9. **Public Outreach**
Develop information for the public and industries on proper use, storage and disposal of materials. Support storm drain stenciling.
10. **Special Studies**
Investigate the development of a free household hazardous waste program. Conduct travel time studies.

<u>Program Component</u>	<u>Labor Estimate (hrs)</u>	<u>Responsibility</u>	<u>Measurable Goal</u>
Programmatic	320 dev 4,000/yr	Indiv. Coordinated	Policies Developed
Regulatory	320	Indiv. Coordinated	New Ordinances
Technical Manual	600	Joint	Manual Adopted
Training	160	Joint	Staff Trained
Database	180 dev 300/yr	Indiv. Coordinated	Database Developed
Mapping	1,000	Indiv. Coordinated	Mapping Completed
Complaints Reporting	60 dev 60/yr	Joint	Hotline Modified
Web Site	40	Joint	Web Site Updated
Public Outreach	100	Joint	Program Developed
Special Studies	1,000	Joint	Studies Initiated

<u>Illicit Discharge Detection and Elimination (IDDE)</u>	<u>2001/2</u>	<u>2002/3</u>	<u>2003/4</u>	<u>2004/5</u>	<u>2005/6</u>	<u>2006/7</u>
IC-1 Interlocal agreement/MOU						
IDDE-1 Develop policies and procedures						
IDDE-2 Revise ordinances						
IDDE-3 Develop program manual						
IDDE-4 Train staff						
IDDE-5 Develop database						
IDDE-6 Complete storm drain mapping						
IDDE-1 Establish inspection and enforcement program						
IDDE-7 Modify complaint hotline						
IDDE-8,9 Program on web site, develop PO materials						
IDDE-10 Investigate HHW program						
Begin program						

IDDE - 1 Programmatic

Detailed Description:

Establish a program with policies and procedures for illicit discharge detection and elimination.

- a) Establish a program for inspecting existing developed areas for illicit connections and discharges, including:
 - 1) Inspections of outfalls where the potential for illicit connections and discharges is high;
 - 2) At least two physical surveys annually and periodic sampling of outfalls along the Truckee River; and
 - 3) Tracing illicit discharges detected from outfall monitoring to determine and eliminate sources.
- b) Prioritize inspections in existing areas based upon:
 - 1) The potential for illicit connections and illegal dumping; and
 - 2) Field screening during mapping (see IDDE-6).
- c) Provide guidance for inspections for illicit connection detection, including:
 - 1) Field screening procedures;
 - 2) Inspection checklists; and
 - 3) A method for identifying areas where the potential for illicit connections/discharges is high.
- d) Provide policies and procedures for enforcement.

Goal:

Institute policies and procedures for a consistent interagency program for the detection and elimination of illicit discharges and connections.

Dependencies/Coordination:

Local jurisdictions will need to ensure that the policies and procedures implement the revised ordinances (IDDE-2) and are consistent with the IDDE program manual (IDDE-3). All components of this program will be developed concurrently with the Industrial Program.

Execution:

Policies and procedures will be developed under contract and in conjunction with development and adoption of the revised ordinances and new program manual. Existing staff will be responsible for ensuring adoption by the appropriate agency. Implementation can be by existing staff or under contract. Where stormwater outfall samples are taken, pretreatment staff would possess the necessary skills for accurate sampling. Pretreatment or storm drain maintenance staff could implement outfall inspections.

Labor Estimate Assumptions:

Labor for development will include policies, procedures and staff commitments. Ongoing labor will include the field inspections, sampling and reporting.

IDDE - 2 Regulatory

Detailed Description:

Include within a new stormwater management ordinance chapter the following:

- a) A prohibition of discharges to storm drains other than stormwater, or a cross-reference to an existing discharge prohibition ordinance.
- b) A prohibition against unauthorized connections to the storm drain system, with a requirement to eliminate or secure approval for any non-stormwater connection.
- c) Right of access for inspections and monitoring of facilities suspected of illicit discharges and/or connections.
- d) Cross-reference to the industrial and construction stormwater discharge regulation ordinances.
- e) Requirements and procedures for notification of spill and emergency response.
- f) Enforcement procedures (e.g. notice of violation, public nuisance, public hearing).
- g) Remedies (e.g. recovering the cost of abatement, monetary penalties, and suspension of storm drain service).
- h) Specific requirements for storage of potentially polluting materials in floodplains.

Goal:

Provide clear authority to the local jurisdictions for the implementation of an illegal discharge detection and elimination program.

Dependencies/Coordination:

Revision of ordinances will need to take place in conjunction with policy and procedure revisions (IDDE-1) and development of a program manual (IDDE-3), in order to ensure consistency among the three components. IDDE ordinance revisions will occur concurrently with Industrial Program ordinance adoption (IP-2).

Execution:

Existing staff will prepare ordinance revisions and governing bodies will adopt them.

Labor Estimate Assumptions:

The labor estimate is a total of all three municipal agencies to revise their respective ordinances and guidelines.

IDDE - 3 Technical Manual

Detailed Description:

Include the following information in a new IDDE program manual:

- a) Guidance for inspections for illicit discharge and connection detection, including:
 - 1) Field screening procedures for evidence of illicit discharges to storm drains (e.g., inspection checklists, physical survey procedures, dry weather flow investigation guidance and procedures for sampling in response to complaints);
 - 2) Procedures for illicit connection detection; and
 - 3) A method for identifying areas where the potential for illicit connections/discharges is high.
- b) Guidance on enforcement policies and procedures.

Goal:

Provide technical guidance for staff on methods to identify evidence of illicit discharges and connections and to provide guidance on procedures for enforcement of ordinances prohibiting illicit discharges/connections.

Dependencies/Coordination:

This component will be developed in conjunction with ordinance, policy and procedure changes to ensure that all program components are consistent.

Execution:

The local jurisdictions will jointly oversee development of an IDDE program manual and each will adopt the manual.

Labor Estimate Assumptions:

The labor estimate is for creation of a new IDDE manual by staff or by a consultant.

IDDE - 4 Training

Detailed Description:

Provide training for government staff on the IDDE policies and procedures outlined in the program manual (IDDE-3).

Goal:

Ensure that government staff implementing the IDDE program is familiar with policies, procedures and technical guidance in the program manual (IDDE-3).

Dependencies/Coordination:

Implementation of this component takes place after policy and procedure adoption (IDDE-1), ordinance revisions (IDDE-2), program manual adoption (IDDE-3) and storm drain mapping (IDDE-6) are complete.

Execution:

Staff or the consultant preparing the IDDE manual (IDDE-3) will provide training to the appropriate government staff from all three jurisdictions.

Labor Estimate Assumptions:

Labor is estimated for three workshops

IDDE - 5 Database

Detailed Description:

Develop a tracking and reporting system.

- a) Track areas and businesses that have a history of illicit discharges and connections.
- b) Define general areas and specific locations with repeated problems.
- c) Track spill incidents and response activities.
- d) Track complaints and enforcement activities.
- e) Develop summary reports for submittal to NDEP.

Goal:

Develop a tracking and reporting system for all spill response activities. This information is required in the annual report.

Dependencies/Coordination:

This component will be coordinated with the database effort under the Industrial Program (IP-5).

Execution:

Each jurisdiction will utilize existing staff or contract to update their pretreatment database (or establish a new database).

Labor Estimate Assumptions:

Labor during development is to add onto the existing database at each agency. Ongoing labor in subsequent years will be to enter data into the database and prepare report material for NDEP.

IDDE - 6 Mapping

Detailed Description:

- a) Complete storm drain mapping and digitizing of storm drain data to:
 - 1) Assist crews in detecting and eliminating illicit discharges and connections;
 - 2) Assist emergency response vehicles in tracking and containing spills;
 - 3) Support IDDE program management;
 - 4) Support the stormwater discharge monitoring program by accurately defining storm drain networks and drainage areas; and
 - 5) Assist in identifying cross connections between storm drains and sewer drains.
- b) Utilize a pin map or GIS layer to identify spill response hot spots.

Goal:

Provide accurate location information to staff implementing all aspects of the IDDE program.

Dependencies/Coordination:

This component provides the foundation for program implementation and will be executed as ordinance revision (IDDE-2) and policy and procedure adoption (IDDE-1) nears completion.

Execution:

Each jurisdiction will contract for mapping and digitizing of their storm drain systems. As resources permit, the systems will be linked.

Labor Estimate Assumptions:

Labor is for existing staff or a contract consultant to map the systems

IDDE - 7

Complaints Reporting

Detailed Description:

Enhance the effectiveness of public reporting of illicit connections/discharges by:

- a) Utilizing the existing spill reporting number and staff to handle IDDE complaints.
- b) Track complaints, staff response and the status of complaints to ensure that illicit connections/ discharges are eliminated.

Goal:

Enhance compliance with the program by ensuring that the public can easily report suspected illicit discharges or connections.

Dependencies/Coordination:

This component will be developed in conjunction with the complaints reporting system for the Industrial Program (IP-7) and is dependent on the complaints reporting system developed previously for the SC and CSD programs.

Execution:

Each jurisdiction will establish a primary number for complaints reporting and provide guidance to personnel for routing calls.

Labor Estimate Assumptions:

This component will be an add-on to the complaints reporting system developed for the Structural Controls and Construction Site Discharge programs (SC-6 and CSD-6).

IDDE - 8 Web Site

Detailed Description:

Place the following information on the Regional Stormwater Quality Management Program web site:

- a) The IDDE technical manual (IDDE-3);
- b) The complaints reporting number (IDDE-7); and
- c) The educational materials developed under IDDE-9.

Goal:

Provide ready access to interested parties for all aspects of the IDDE program.

Dependencies/Coordination:

The web site is more fully described under PO-3. Posting of the IDDE manual (IDDE-3), complaint contact number (IDDE-7) and educational materials (IDDE-9) will occur once these components are complete.

Execution:

The jurisdictions will jointly establish a web site for the Truckee Meadows Stormwater Quality Management Program (see PO-3).

Labor Estimate Assumptions:

Labor is for an add-on to the web site developed and maintained under PO-3.

IDDE - 9

Public Outreach

Detailed Description:

Expand public education programs to:

- a) Include materials for the general public on alternative use of low/non toxic fertilizers, pesticides and herbicides, and the proper collection and disposal of household hazardous wastes and pet wastes;
- b) Require storm drain stenciling, stamping or other techniques on all new storm drain inlets and initiate a program to label all existing storm drain inlets;
- c) Provide new industries with information on materials that are industry-specific;
- d) Develop brochures in support of the IDDE program; and
- e) Provide educational and public reporting information on the Regional Stormwater Quality Management Program web site.

Goal:

Reduce the incidence of illicit discharges by the general public and industries through education on use of alternative materials, proper disposal of wastes and public reporting of illicit discharges and connections.

Dependencies/Coordination:

This component will be developed in conjunction with the overall Public Outreach Program (PO).

Execution:

The local jurisdictions will contract with the University of Nevada Cooperative Extension and seek grant funding to assist in the education effort.

Labor Estimate Assumptions:

Labor is to create information materials, add material to the website, expand the drain labeling program and make six publicity releases.

IDDE - 10 Special Studies

Detailed Description:

- a) Investigate conducting household hazardous waste (HHW) collection days:
 - 1) Coordinate household hazardous waste pick up with a private vendor and ensure information is available to the public.
 - 2) Investigate the viability of jointly conducted household hazardous waste collections days offered free to the public on a quarterly basis.
 - 3) Advertise the availability of no/low cost household hazardous waste disposal through general media and the regional website.
- b) Determine travel times in storm drain systems for areas identified as environmentally sensitive (See MO-1) or spill hot spots (See IDDE-6).

Goal:

- a) Reduce the incidence of illicit discharge by the general public by providing legal and low or no cost disposal.
- b) Improve spill response and cleanup activities.

Dependencies/Coordination:

- a) This component can be developed independent of most IDDE program components, but should be coordinated with Public Outreach (PO).
- b) This component is dependent on mapping (IDDE-6) and designation of environmentally sensitive areas (MO-1) and identification of spill hot spot areas (IDDE-6).

Execution:

- a) The local jurisdictions will evaluate an in-house HHW disposal program versus contracting with a private vendor, and select a method to provide HHW disposal. Decisions about frequency, charges, drop-off sites and publicity will be identified in the evaluation.
- b) The agencies will model travel times for certain designated areas to improve their spill response.

Labor Estimate Assumptions:

About one quarter of the labor is estimated for investigating a HHW program, three quarters of the labor is for travel time studies.

2.2.9 Industrial Program

Industrial Program (IP)

Truckee Meadows Stormwater
NPDES Permit Implementation



Description: The industrial discharge regulation program builds on the existing wastewater pretreatment program, utilizing existing staff to implement stormwater management. The program involves written policies and procedures, ordinance revision, database tracking, an industrial BMP handbook, training for inspectors, complaints reporting and posting information on the web site.

KEY IP PROGRAM COMPONENTS

<p>1. <u>Programmatic</u> Develop policies and procedures for plan review, inspection, stormwater monitoring by facility operators, and enforcement. Utilize existing staff to implement program.</p> <p>2. <u>Regulatory</u> Revise pretreatment ordinances to specifically address stormwater.</p> <p>3. <u>Technical Manual</u> Adopt a local Industrial BMP Handbook that includes policies and procedures outlined above, SWPPP guidance and BMP technical guidance.</p> <p>4. <u>Training</u> Conduct training for pretreatment and building inspectors on BMP handbook. Conduct operator training during site visits.</p>	<p>5. <u>Database</u> Utilize a database to manage the program, including facility information, program actions and operator stormwater monitoring results.</p> <p>6. <u>Monitoring</u> Develop guidelines for determining when stormwater monitoring is necessary by facility operators.</p> <p>7. <u>Complaints Reporting</u> Update the complaints system for reporting of industrial discharge problems.</p> <p>8. <u>Web Site</u> Post BMP handbook and complaint contact information on the web site.</p>																																			
<table><tr><th><u>Program Component</u></th><th><u>Labor Estimate (hrs)</u></th><th><u>Responsibility</u></th><th><u>Measurable Goal</u></th></tr><tr><td>Programmatic</td><td>160 dev 4,000/yr</td><td>Indiv. Coordinated</td><td>Policies Developed</td></tr><tr><td>Regulatory</td><td>200</td><td>Indiv. Coordinated</td><td>New Ordinances</td></tr><tr><td>Technical Manual</td><td>760</td><td>Joint</td><td>Manual Adopted</td></tr><tr><td>Training</td><td>120</td><td>Joint</td><td>Staff Trained</td></tr><tr><td>Database</td><td>180 dev 600/yr</td><td>Indiv. Coordinated</td><td>Database Developed</td></tr><tr><td>Monitoring</td><td>180</td><td>Indiv. Coordinated</td><td>Policies Developed</td></tr><tr><td>Complaints Reporting</td><td>60 dev 60/yr</td><td>Joint</td><td>Hotline Modified</td></tr><tr><td>Web Site</td><td>40</td><td>Joint</td><td>Web Site Updated</td></tr></table>	<u>Program Component</u>	<u>Labor Estimate (hrs)</u>	<u>Responsibility</u>	<u>Measurable Goal</u>	Programmatic	160 dev 4,000/yr	Indiv. Coordinated	Policies Developed	Regulatory	200	Indiv. Coordinated	New Ordinances	Technical Manual	760	Joint	Manual Adopted	Training	120	Joint	Staff Trained	Database	180 dev 600/yr	Indiv. Coordinated	Database Developed	Monitoring	180	Indiv. Coordinated	Policies Developed	Complaints Reporting	60 dev 60/yr	Joint	Hotline Modified	Web Site	40	Joint	Web Site Updated
<u>Program Component</u>	<u>Labor Estimate (hrs)</u>	<u>Responsibility</u>	<u>Measurable Goal</u>																																	
Programmatic	160 dev 4,000/yr	Indiv. Coordinated	Policies Developed																																	
Regulatory	200	Indiv. Coordinated	New Ordinances																																	
Technical Manual	760	Joint	Manual Adopted																																	
Training	120	Joint	Staff Trained																																	
Database	180 dev 600/yr	Indiv. Coordinated	Database Developed																																	
Monitoring	180	Indiv. Coordinated	Policies Developed																																	
Complaints Reporting	60 dev 60/yr	Joint	Hotline Modified																																	
Web Site	40	Joint	Web Site Updated																																	

Conceptual Long Term Implementation Schedule

Industrial Program (IP)	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7
IC-1 Interlocal agreement/MOU						
IP-1,6 Develop policies, procedures and monitoring guide						
IP-2 Revise ordinances						
IP-3 Develop Industrial BMP Handbook						
IP-4 Train staff						
IP-5 Develop database						
IP-7 Modify complaint hotline						
IP-8 Place program on web site						
Begin program						

IP - 1
Programmatic

Detailed Description:

Develop written policies and procedures outlining industrial site plan review, inspections, enforcement and monitoring for the industrial site discharge program.

- a) Incorporate the Notice of Intent into the existing permitting process.
- b) Develop guidance and checklists for staff to facilitate existing plan reviews and inspections.
- c) Establish guidelines for industrial stormwater monitoring by site operators.
- d) Establish procedures for inspection of facilities and enforcement of industrial stormwater discharge ordinances.
- e) Utilize existing pretreatment staff for plan review, inspection and enforcement.

Goal:

Provide written guidance to local government staff and industrial site operators regarding the implementation of industrial site discharge regulation by the local pretreatment programs.

Dependencies/Coordination:

Local jurisdictions will need to ensure that the policies and procedures implement the revised ordinances (IP-2) and are consistent with the local Industrial BMP Handbook (IP-3). All components of this program will be developed concurrently with the Illicit Discharge Detection and Elimination program (see IDDE fact sheet).

Execution:

Policies and procedures will be developed under contract and in conjunction with development and adoption of the revised ordinances and the Industrial BMP Handbook. Existing staff will be responsible for ensuring adoption by the appropriate agency.

Labor Estimate Assumptions:

The programmatic labor is for each agency to provide review and adoption in the development stage. The program will require review and updates at a 10 to 20-year interval. Ongoing annual labor is estimated for plan review, inspections and enforcement.

IP - 2 Regulatory

Detailed Description:

Revise existing pretreatment ordinances to include the following elements:

- a) Coverage of the facility's stormwater discharges under its wastewater discharge permit or waste inspection certificate;
- b) Requirement for those industries subject to stormwater effluent limitations (nine categories of dischargers as defined in 40 CFR, Subchapter N) to obtain a stormwater discharge permit from the Nevada Department of Environmental Protection;
- c) Ability to require site operators to prepare SWPPPs (stormwater pollution prevention plans) and implementation of BMPs;
- d) Right to review compliance documents (e.g. permits and SWPPPs);
- e) Referral to a local Industrial BMP Handbook as the standard for preparation of the SWPPPs and selection of BMPs;
- f) Right of entry to inspect private property;
- g) Enforcement procedures and penalties, either cited in the article or cross-referenced to the pretreatment ordinances. Ensure that enforcement is not limited only to wastewater; and
- h) Requirement for industrial facilities within the sphere of influence to connect to sanitary sewer for wastewater disposal.

Goal:

Provide clear authority to the local jurisdictions for the implementation of an industrial discharge regulation program.

Dependencies/Coordination:

Revision of ordinances will take place in conjunction with policy and procedure revisions (IP-1) and development of the local industrial BMP handbook (IP-3), in order to ensure consistency among the three components. Industrial program ordinance revision will occur concurrently with IDDE ordinance adoption (IDDE-2).

Execution:

Existing staff will prepare ordinance revisions and governing bodies will review and adopt them.

Labor Estimate Assumptions:

The labor estimate is a total of all three municipal agencies to revise their respective ordinances and guidelines.

IP - 3

Technical Manual

Detailed Description:

Develop and adopt a local Industrial BMP Handbook to guide staff and industrial facility operators in managing stormwater pollution. The handbook will:

- a) Include the policies and procedures identified under IP-1;
- b) Establish a procedure and provide standards for preparation of local industrial SWPPPs; and
- c) Provide technical guidance for staff and facility operators on appropriate BMP selection, design and maintenance to ensure that BMPs meet the EPA standard of best available technology economically achievable (BAT)/best conventional pollutant control technology (BCT).

Goal:

Provide policy, procedure and technical guidance for staff and industrial facility operators on BMP selection, design and maintenance and to ensure that the BMPs utilized meet the EPA standards of BAT/BCT.

Dependencies/Coordination:

This component will be developed in conjunction with policy and procedure changes (IP-1) and ordinance revisions (IP-2) to ensure that all program components are consistent.

Execution:

The local jurisdictions will jointly oversee development of the handbook by a consultant, similarly to the draft Construction Activities BMP Handbook that was developed in 1994. Each jurisdiction will adopt the handbook.

Labor Estimate Assumptions:

The labor estimate is for creation of a new Industrial BMP Handbook by a consultant.

IP - 4 Training

Detailed Description:

Develop a cross-training program for pretreatment and building inspectors on the local Industrial BMP Handbook, with instruction on what to look for during site inspections related to:

- a) Non-point source pollution;
- b) Illicit connections;
- c) Illegal dumping;
- d) Poor materials management;
- e) How to review a SWPPP and construction drawings; and
- f) Documentation procedures.

Goal:

Ensure that government staff inspecting industrial sites is familiar with policies, procedures and technical guidance provided in the BMP handbook.

Dependencies/Coordination:

Implementation of this component takes place after ordinance revision, policy and procedure adoption and handbook adoption.

Execution:

The consultant preparing the handbook will provide training to the appropriate government staff from all three jurisdictions.

Labor Estimate Assumptions:

Labor estimate includes staff time or consultant time to develop and conduct two workshops for Reno, Sparks and Washoe County.

IP - 5 Database

Detailed Description:

Establish a local industrial discharger database for management purposes or incorporate stormwater management into the existing pretreatment program database. The database will include the following:

- a) NDEP's existing database;
- b) Location, permit number and risk-based prioritization;
- c) Tracking of industrial monitoring results provided by facility operators (if required by program staff); and
- d) Tracking of complaints and enforcement actions.

Data will be input as new facilities are permitted. Industrial facility locations and relevant information can be incorporated into a geographic information system (GIS), if appropriate and cost-effective.

Goal:

Provide a coordinated management system for each jurisdiction, such that program actions (e.g. inspections, enforcement) are tracked and can be reported to NDEP.

Dependencies/Coordination:

This component will be initiated after policies and procedures are developed (IP-1), ordinances are adopted (IP-2) and an Industrial BMP Handbook is developed and adopted (IP-3), so that the database will include information important to ensuring compliance with and management of the Industrial Program.

Execution:

Each jurisdiction will contract to update their pretreatment database (or establish a new database).

Labor Estimate Assumptions:

Labor during development is to add onto the existing database of each member agency. Ongoing labor in subsequent years will be to enter data into the database and prepare report material for NDEP.

IP - 6 Monitoring

Detailed Description:

Include stormwater monitoring by facility operators in the Industrial Program, by establishing:

- a) Authority under their ordinances to require monitoring (see IP-2);
- b) Criteria for when monitoring will be required; and
- c) Guidelines for how it will be conducted.

Goal:

Ensure that the local jurisdictions have adequate authority to require stormwater monitoring by industrial facility operators and that guidance is provided to ensure monitoring is necessary and appropriate.

Dependencies/Coordination:

Monitoring requirements will be developed when establishing policies and procedures (see IP-1) and revising the pretreatment ordinances (see IP-2). Monitoring criteria and guidelines will be included in the local Industrial BMP Handbook (see IP-3).

Execution:

Existing staff will prepare ordinance revisions, to be adopted by the appropriate governing body (see IP-2). Monitoring criteria and guidelines will be prepared under contract. Pretreatment staff will require industrial stormwater monitoring pursuant to the revised ordinances and will be responsible for reviewing monitoring results, reporting results to NDEP and requiring any remedial actions.

Labor Estimate Assumptions:

Labor during the development phase will include establishing criteria and guidelines. Ongoing labor for conducting monitoring and remedial actions is included in IP-1.

IP - 7

Complaints Reporting

Detailed Description:

Facilitate public reporting of industrial discharge problems by:

- a) Providing contact information in the local Industrial BMP Handbook (IP-3) and on the Regional Stormwater Quality Management Program web site (IP-8).
- b) Enhancing the current complaint and reporting system developed for the SC and CSD programs to include industrial site discharge complaints.
- c) Provide training for personnel answering industrial site discharge complaints to ensure the complaints are routed to the appropriate department and are handled in a timely manner.
- d) Track industrial site discharge complaints and resolutions.

Goal:

Enhance compliance with the program by ensuring that the public can easily report suspected discharges from industrial facilities.

Dependencies/Coordination:

This component will be developed in conjunction with the complaints reporting system for the IDDE program (IDDE-7) and is dependent on the complaints reporting system developed previously for the SC and CSD programs.

Execution:

Each jurisdiction will establish a primary number for complaints reporting and provide guidance to personnel for routing calls.

Labor Estimate Assumptions:

This component will be an add-on to the complaints reporting system developed for the Structural Controls and Construction Site Discharge programs (SC-6 and CSD-6).

IP - 8
Web Site

Detailed Description:

Provide information to the public on the Industrial Program.

- a) Post Industrial BMP Handbook on the web site (see PO-3).
- b) Post the complaint contact number on the web site.

Goal:

Provide ready access to interested parties for all aspects of the Industrial Program.

Dependencies/Coordination:

This component is more fully described under PO-3. Posting of the handbook will occur once the handbook is complete and adopted (see IP-3). Posting of the complaint contact number will take place after the complaints reporting system is established (see IP-7).

Execution:

The jurisdictions will jointly establish a web site for the Regional Stormwater Quality Management Program (See PO-3). Information on the Industrial Program will be added to the web site once complete.

Labor Estimate Assumptions:

Labor is for an add-on to the web site developed and maintained under PO-3.

Section 3: Program Management, Monitoring and Reporting

This section describes the institutional structure and staffing for the program development and implementation activities described in Section 2, as well as additional requirements set forth in the Truckee Meadows municipal stormwater discharge permit.

3.1 Program Management and Regulatory Compliance

Thus far, the Truckee Meadows Interlocal Stormwater Committee (TMISC) has provided oversight of the development of the RSQMP utilizing existing staff from various departments (See Section 1.3). These agency staff met regularly to review and revise the proposed program elements developed by their consultants, culminating with this final stormwater quality management program. This effort was conducted under an Interlocal Agreement that delineated each party's responsibilities (See Appendix B). The Interlocal Agreement is proposed for revision under the Intergovernmental Coordination program element (See Section 2.2.1), which provides for a Stormwater Coordinator to oversee program development and implementation. The Stormwater Coordinator will report to the committee and ensure that the activities conducted by the myriad agency staff and consultants involved in the RSQMP are consistent and coordinated.

A key component to the success of the RSQMP is the overall management and coordination of the program by a dedicated Stormwater Coordinator. Among other duties, the Stormwater Coordinator will review all project related documents, coordinate and attend all TMISC meetings, report to the TMISC on the status of the RSQMP, and develop a new interlocal agreement or MOU for the TMISC. The Stormwater Coordinator will also be responsible for the development of an overall Public Education and Outreach program. An effective Public Education and Outreach program will be essential to raising public awareness about of the goals and objectives of the RSQMP as well as general water quality issues in the Truckee Meadows. It will also assist in providing greater support and understanding of the program, which will be particularly important when attempting to pass new ordinances and institute new funding initiatives. The Stormwater Coordinator will also participate in the ongoing Health District study on upgrading street sweepers and using alternative deicing methods. These activities could have a significant impact on stormwater quality. In addition, the Stormwater Coordinator will work with staff and the TMISC to develop Policy Committees set up to develop new policies, procedures and ordinances and Technical Advisory Committees set up to develop the new technical guidance documents proposed for the various elements of the RSQMP. The Stormwater Coordinator will be responsible for maintaining knowledge of current and proposed state and federal policies, regulations and programs that impact "non-point" source pollution programs such as the RSQMP. Finally, the Stormwater Coordinator will be responsible for the preparation and/or review of annual reports submitted to NDEP and the EPA.

Some of the components described in the nine RSQMP elements (Section 2) will be conducted jointly (e.g. development of technical manuals, staff training), while others will require individual actions that will be coordinated between the four permittees independently (e.g. adoption of

ordinances, database development/modification). The Stormwater Coordinator will be responsible for ensuring that, when the work plan for each component is developed, it identifies coordination mechanisms and key points in the program development process for ensuring consistency and timely execution.

For example, the three program elements that address runoff from new or redevelopment (Land Use Planning, Structural Controls and Construction Site Discharge) will be developed concurrently. Ordinances, policies and procedures will be developed by the individual jurisdictions, while the technical manuals and land use planning study will be developed jointly. The joint documents can provide a reference point that allows the Stormwater Coordinator to review each permittee's ordinances, policies and procedures for consistency. Some variation among the jurisdictions is to be expected, but the joint documents will provide the standard that must be met. In this example, the key point in the ordinance and policy development process for assessing coordination is when the documents are at an early draft stage.

Each of the four permittees is held responsible under the NPDES municipal stormwater permit for compliance with the permit, except that none is responsible for the acts or omissions of another. Revision of the existing Interlocal Agreement (See Section 2.2.1, Intergovernmental Coordination) will identify each permittee's roles and responsibilities in fully developing and implementing the joint and coordinated program components. Regulatory compliance will also include annual reporting to the NDEP, as more fully described in Section 3.5 below.

3.2 Information and Data Management

Databases are proposed for the following six program elements to track information for program management and reporting:

- Municipal Operations;
- Stormwater Discharge Monitoring;
- Structural Controls;
- Construction Site Discharge;
- Illegal Discharge Detection and Elimination; and
- Industrial Program.

For some program elements, existing databases may be modified (e.g. Construction Site Discharge, Industrial Program), while new databases may be established for others (e.g. Stormwater Discharge Monitoring). For each program element, the database will be developed or modified once policies, procedures and technical guidance have been developed in order to ensure that the data fields and queries track and analyze appropriate information. Information needs will be identified for program implementation, for example, permit tracking, and scheduling of maintenance, inspection and enforcement activities. Information needs for annual reporting will also be identified; such as monitoring results, spill response activities, inspections and enforcement actions.

Table 3-1 defines the information preliminarily identified to be included in each of the databases. Additional information may be identified as the program elements are developed.

TABLE 3-1 Program Element Databases and Information Tracked					
Municipal Operations	Stormwater Monitoring	Structural Controls	Construction Site Discharge	Illegal Discharge Detection & Elimination	Industrial Program
Facility type	Sample location	BMP location and type	Site location and permit no.	Spill incidents and illicit connections detected	Facility location and permit no.
Location	Drainage area	BMP Ownership	SWPPP Best Management Practices used	Spill response and illicit connections removed	Risk-based prioritization
Date of maintenance	Precipitation and flow	Inspection dates	Inspection dates	General areas with repeated problems	Inspection dates
Amount and analysis of materials removed	Sample Date/Time	Maintenance needs and activities	Construction related complaints	Specific locations with repeated problems	Monitoring results
Problem areas	Sample Results	Complaints and Enforcement	Enforcement	Complaints and Enforcement	Complaints and Enforcement

3.3 Annual Prioritization and Budget Development Process

Section 4 sets out a conceptual schedule and labor hours estimates for development and implementation of the RSQMP. The permittees and Stormwater Coordinator will need to annually prioritize program activities and ensure budget allocations. Following is a schedule identifying the annual planning efforts necessary to ensure that the steps identified in the conceptual schedule will lead to the establishment and implementation of the programs. In addition, Table 3-2 identifies in italics the deadlines specified in the NPDES permit and the committee's Interlocal Agreement for certain activities.

TABLE 3-2
Annual Program Management and Budgeting
(Typical Annual Cycle)

Date	Activity
<i>January 14</i>	<i>Submit annual report to NDEP and EPA</i>
<i>July</i>	<i>Elect TMISC Chair</i>
July	Begin implementation of annual work plan
October	Update monitoring plan
October – December	Develop annual work plan and budget for next fiscal year
<i>November 1</i>	<i>Submit monitoring plan for following year to NDEP and EPA</i>
November/December	Develop annual report

3.4 Stormwater Discharge Monitoring Program

Technical Memorandum 2.2 (See Appendix C) outlines the parameters for the Stormwater Discharge Monitoring Plan for the permittees. This plan was approved by the NDEP and became effective on 1 July 2001. This program has been developed to comply with the stipulations of the NPDES stormwater permit. The permit also stipulates that a monitoring plan is due annually, submitted to both NDEP and the U.S. Environmental Protection Agency, Region IX, on November 1 of each year. The program described in Technical Memorandum 2.2 constitutes the monitoring program for the permittees for FY 2001/2002. However, the parameters described in that memorandum are subject to revision, should monitoring results or other factors indicate a need for modification. The November 1 monitoring plan submittal will describe any changes to the approved program that are proposed for the coming fiscal year. The permit stipulates that the plans are subject to the approval of the NDEP.

3.5 Annual Report

The NPDES permit (Appendix A) also requires the submittal of an annual report to the NDEP and the U.S. Environmental Protection Agency Region IX, due on or before January 14. The permit specifies that the report must include:

- Current stormwater quality management program (with proposal revisions);
- Data analysis and pollutant load estimates;
- Drainage basin map updates;
- Inspections and enforcements;
- Public education activities; and
- Annual expenditures and budget for the coming year.

In addition, the RSQMP identifies measurable goals for the development of each program component, and the annual report will identify when each goal is met. Ongoing program implementation activities will also be included, including information from databases developed for the RSQMP. For example, NDEP has indicated that an estimate of material removed from street sweeping and analyses of that material are expected to be included in the annual report.

Section 4: Program Schedule and Budget

4.1 Overview

This section describes the approved conceptual schedule that will be required by the Cities of Reno and Sparks, Washoe County and NDOT to develop and implement all of the RSQMP elements in their respective jurisdictions (see Table 4-1). It also identifies the estimated resources needed through fiscal year 2003/2004 (see Table 4-2). The conceptual schedule is subject to revision as new regulations become effective and the overall program develops. The TMISC may revise the activities and schedule each year and submit the revised plan to NDEP and EPA in the annual report. The plan submitted herein for approval (by NDEP) is for development and implementation of the RSQMP from fiscal year 2001/2 to 2003/4. The purpose of the conceptual long-term schedule is to ensure that all of the required elements of the NPDES stormwater permit are addressed and implemented within a reasonable timeframe. This schedule should be used as a tool to guide program development and implementation.

As can be seen on Table 4-1, the schedule proposes to phase in all of the required program elements discussed in Section 2 over a six-year period. This phased implementation approach will allow interagency agreements to set the framework and ensure adequate budget and staffing for further program development. Furthermore, phasing will allow the permittees to focus their efforts on producing quality results and will not spread their resources too thinly. The Intergovernmental Coordination and Public Outreach elements are proposed to begin the RSQMP so that clear roles and responsibilities are established and public awareness occurs early on. The Municipal Operations and Stormwater Discharge Monitoring elements will be the next two elements of the RSQMP to be implemented. The Municipal Operations program was selected for early implementation, as it is focused on improving existing programs and practices. The NPDES permit requires early initiation of the monitoring program to establish baseline information on the quality of stormwater discharges and a Stormwater Discharge Monitoring Plan was accepted by NDEP in 2001.

The regulatory programs are the next elements proposed for development and implementation in the RSQMP. They are categorized in two groups for the purposes of scheduling:

- Land Use Planning, Structural Controls, and Construction Site Discharge (the new development programs), and
- Illicit Discharge Detection and Elimination (IDDE) and Industrial Programs.

The new development programs are initiated in fiscal year 2002/3, with the IDDE and Industrial Programs following in 2003/4.

Table 4-2 provides an estimate of the resources required to develop and implement the RSQMP over the next two fiscal years, including the current fiscal year (2001/2). The fiscal year for all of the member agencies of the TMISC begins July 1 and ends June 30 of the following year. The total estimated resources required to develop and implement the RSQMP through fiscal year 2003/4 is approximately 5,300 labor hours/year. Existing and/or new staff will conduct the majority of the work required to complete the components discussed in detail in the fact sheets in Section 2.2. At the discretion of the TMISC, several tasks such as an evaluation of land use planning policies and methods (LU-5), the development of a new chapter for the local drainage design manuals (SC-3) and the revision of the existing Construction Activities Handbook (CSD-3) may be completed by a contracted consultant.

TABLE 4-1
Truckee Meadows Regional Stormwater Quality Management Program
Conceptual Long-Term Implementation Schedule

Elements and Components	Fiscal Year					
Intergovernmental Coordination (IC)	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7
IC-1 Interagency agreement/MOU						
IC-2 Stormwater Coordinator						
Public Outreach (PO)	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7
IC-1 Intergovernmental coordination						
PO-1 Develop policies and procedures						
PO-2 Develop and advertise complaint hotline						
PO-3 Develop web site						
PO-4 Public Outreach						
Municipal Operations (MO)	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7
IC-1 Intergovernmental coordination						
MO-1 Develop policies and procedures						
MO-2 Develop design criteria for catch basins						
MO-3 Train staff						
MO-4 Develop database						
MO-5 Participate in Health District study*						
MO-5 Evaluate sweeper technologies and practices						
Begin Program						
*schedule is dependent on continuance of program						
Stormwater Discharge Monitoring (SWM)	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7
SWM-1 Interagency agreement/MOU						
SWM-2 Develop policies and procedures						
SWM-3 Develop technical manual						
SWM-4 Train staff						
SWM-5 Develop database						
SWM-6 Monitoring						
SWM-7 Place program on web site						
SWM-8 Develop Public Outreach materials						
SWM-9 Special Studies						
Begin Program						
Land Use Planning (LU)	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7
IC-1 Intergovernmental coordination						
LU-1 Develop policies and procedures						
LU-2 Revise ordinances						
LU-3 Train Staff						
LU-4 Public Outreach						
LU-5 Evaluate planning and outreach techniques						
Begin program						

TABLE 4-1 (continued)

Structural Controls (SC)	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7
IC-1 Intergovernmental coordination						
SC-1 Develop policies and procedures						
SC-2 Revise ordinances						
SC-3 Revise drainage manuals						
SC-4 Train staff and site designers/developers						
SC-5 Develop database						
SC-1 Establish inspection and enforcement program						
SC-6 Modify complaint hotline						
SC-7 Place program on web site						
SC-8 Develop maintenance guide and PO materials						
Begin program						
Construction Site Discharge (CSD)	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7
IC-1 Intergovernmental coordination						
CSD-1 Develop policies and procedures						
CSD-2 Revise ordinances						
CSD-3 Update Construction Activities BMP Handbook						
CSD-4 Train staff and site designers/operators						
CSD-5 Modify or create database						
CSD-6 Modify complaint hotline						
CSD-7 Place program on web site						
Begin program						
Illicit Discharge Detection and Elimination (IDDE)	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7
IC-1 Intergovernmental coordination						
IDDE-1 Develop policies and procedures						
IDDE-2 Revise ordinances						
IDDE-3 Develop program manual						
IDDE-4 Train staff						
IDDE-5 Develop database						
IDDE-6 Complete storm drain mapping						
IDDE-1 Establish inspection and enforcement program						
IDDE-7 Modify complaint hotline						
IDDE-8,9 Program on web site, develop PO materials						
IDDE-10 Investigate HHW program						
Begin program						
Industrial Program (IP)	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7
IC-1 Intergovernmental coordination						
IP-1,6 Develop policies, procedures and monitoring guide						
IP-2 Revise ordinances						
IP-3 Develop Industrial BMP Handbook						
IP-4 Train staff						
IP-5 Develop database						
IP-7 Modify complaint hotline						
IP-8 Place program on web site						
Begin program						

Table 4-2
Truckee Meadows Regional Stormwater Quality Management Program
Estimated Near Term Resource Requirements

Elements and Components	Fiscal Year (labor hours)			Total
	2001/2	2002/3	2003/4	
Intergovernmental Coordination (IC)				
IC-1 Interlocal agreement/MOU	100	100		200
IC-2 Stormwater Coordinator	800	800	800	2400
Public Outreach (PO)				
PO-1 Develop policies and procedures	120	120		240
PO-2 Develop and advertise complaint hotline ¹			80	80
PO-3 Develop web site	300			300
PO-4 Public Outreach	160	160	160	480
Municipal Operations (MO)				
MO-1 Develop policies and procedures		320		320
MO-2 Develop design criteria for catch basins ²				0
MO-3 Train staff			100	100
MO-4 Develop database			320	320
MO-5 Participate in Health District study	160	160		320
Stormwater Discharge Monitoring (SWM)				
SWM-1 Interlocal agreement/MOU	160			160
SWM-2 Develop policies and procedures	200			200
SWM-3 Develop technical manual	200			200
SWM-4 Train staff		100		100
SWM-5 Develop database		160		160
SWM-6 Monitoring ¹		2260	2100	4360
SWM-7 Place program on web site		40		40
SWM-8 Develop Public Outreach materials		100		100
SWM-9 Special Studies*				0
Land Use Planning (LU)				
LU-1 Develop policies and procedures		300	300	600
LU-2 Revise ordinances		300	300	600
LU-3 Train Staff ¹			80	80
LU-4 Public Outreach ¹			120	120
LU-5 Evaluate planning and outreach techniques		500		500

Notes:

1 - This component is envisioned to extend into FY 2004/5 with an equal number of annual hours required

2 - Labor for MO-2 is included in the drainage design manual revision (SC-3)

* - Activities and labor hours for this component occur after FY 2003/4

TABLE 4-2 (continued)

Structural Controls (SC)	2001/2	2002/3	2003/4	
SC-1 Develop policies and procedures		120	120	240
SC-2 Revise ordinances		160	160	320
SC-3 Revise drainage manuals		380	380	760
SC-4 Train staff and site designers/developers ¹			80	80
SC-5 Develop database ¹			50	50
SC-1 Establish inspection and enforcement program*				0
SC-6 Modify complaint hotline*				0
SC-7 Place program on web site*				0
SC-8 Develop maintenance guide and PO materials*				0
Construction Site Discharge (CSD)	2001/2	2002/3	2003/4	
CSD-1 Develop policies and procedures		160	160	320
CSD-2 Revise ordinances		90	90	180
CSD-3 Update Construction Activities BMP Handbook		300	300	600
CSD-4 Train staff and site designers/operators ¹			80	80
CSD-5 Modify or create database*				0
CSD-6 Modify complaint hotline*				0
CSD-7 Place program on web site*				0
Illicit Discharge Detection and Elimination (IDDE)	2001/2	2002/3	2003/4	
IDDE-1 Develop policies and procedures ¹			160	160
IDDE-2 Revise ordinances ¹			160	160
IDDE-3 Develop program manual ¹			300	300
IDDE-4 Train staff*				0
IDDE-5 Develop database*				0
IDDE-6 Complete storm drain mapping*				0
IDDE-1 Establish inspection and enforcement program*				0
IDDE-7 Modify complaint hotline*				0
IDDE-8,9 Program on web site, develop PO materials*				0
IDDE-10 Investigate HHW program*				0
Industrial Program (IP)	2001/2	2002/3	2003/4	
IP-1,6 Develop policies, procedures and monitoring guide ¹			160	160
IP-2 Revise ordinances ¹			100	100
IP-3 Develop Industrial BMP Handbook ¹			380	380
IP-4 Train staff*				0
IP-5 Develop database*				0
IP-7 Modify complaint hotline*				0
IP-8 Place program on web site*				0
Total Estimated Labor Hours for Program Development				15870

Notes:

1 - This component is envisioned to extend into FY 2004/5 with an equal number of annual hours required

* - Activities and labor hour requirements for this component occur after FY 2003/4

Section 5: References

- Dobyns, D., 2001. Personal communication. Former Environmental Services Manager, City of Reno and former chairman of the TMISC.
- Nevada State Demographers Office, 2000. *Nevada County Population Projections 2000 to 2010*. Prepared for the Nevada Department of Taxation in conjunction with the Nevada Small Business Development Center.
- Pitt, R., Lalor, M., Adrian, D.D., Field, R. and D. Barbe', 1993. *Investigation of Inappropriate Pollution Entries into Storm Drainage System: A User's Guide*. Prepared in cooperation with the USEPA, Center of Environmental Research Information, Cincinnati, Ohio and The University of New Orleans, Urban Waste Management and Research Center.
- Roesner, L.A. and B.R. Urbonas, et al. 1998. *Urban Runoff Quality Management*, WEF Manual of Practice No. 23, ASCE Manual and Report on Engineering Practice No. 87.
- Schueler, T.R., 1987. *Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban Best Management Practices*. Metropolitan Washington Council of Governments, Washington, D.C.
- Tuttle, L., 2001. Personal communication. Planning Manager, Community Development, City of Reno.
- U.S. Environmental Protection Agency, 2000. *Storm Water Phase II Final Rule – An Overview*. Office of Water, EPA 833-F-00-001, January 2000, Fact Sheet 1.0.
- U.S. Environmental Protection Agency, 1997. *Terms of the Environment*, <http://www.epa.gov/OCEPAterms/>
- U.S. Environmental Protection Agency, 1994. *TMDL Case Study: Truckee River, Nevada*. Office of Water (4503F) Washington, DC 20460 EPA841-F-94-006, August 1994 Number 13.
- U.S. Environmental Protection Agency, 1983. Results of the Nationwide Urban Runoff Program. Water Planning Division, NTIS number PB 84185552, Washington, D.C., December 1983.
- Western Regional Climate Center, 2000. *Western U.S. Climate Historical Summaries*, <http://www.wrcc.dri.edu/>. Reno WSFO Airport, Nevada (26679), Period of Record: 3/1/1937 to 12/31/2000.

Appendix A

Nevada Division of Environmental Protection

AUTHORIZATION TO DISCHARGE

In compliance with the provisions of the Federal Water Pollution Control Act as amended, (33 U.S.C. 1251 et. seq; the "Act"), and Chapter 445A of the Nevada Revised Statutes,

City of Reno, City of Sparks, Washoe County, and Nevada
Department of Transportation

are authorized to discharge municipal stormwater runoff
to receiving waters named:

Truckee River and tributaries,
Silver Lake Playa and tributaries
Swan Lake Playa and tributaries, and
Whites Lake Playa and tributaries

in accordance with monitoring requirements, and other conditions
set forth in Parts I, II and III hereof.

This permit shall become effective on JANUARY 14, 2000.

This permit and the authorization to discharge shall expire at
midnight, JANUARY 14, 2005.

Signed this FOURTEENTH day of JANUARY, 2000.

Robert J. Saunders
Bureau of Water Pollution Control

Part I

A. SPECIAL CONDITIONS

1. Duty to Comply

Each permittee owns and operates storm drain systems. The systems have multiple points of discharge. The permittees shall develop, administer, implement, and enforce a *Stormwater Quality Management Program* within their own jurisdictions in accordance with the conditions of this permit. Each permittee has the duty to comply with this permit and is responsible for its own compliance, and no permittee shall be held responsible for acts or omissions of another.

The Nevada Division of Environmental Protection (Division) retains the authority to require non-cooperating permittees to obtain separate discharge permits.

2. Stormwater Quality Management Committee

The permittees shall form a Stormwater Quality Management Committee to guide implementation of the *Stormwater Quality Management Program* and otherwise comply with this permit. The committee shall select one member to serve as lead agency representative for purposes of administration, reporting, and coordination. The committee shall be formed and lead agency selected within six months of the effective date of this permit.

3. Stormwater Quality Management Program

The *Stormwater Quality Management Program* shall control pollutants in stormwater discharges to the maximum extent practicable. The goal shall be to reduce pollutants to a level compatible with the beneficial uses designated for the receiving waters. The program shall be revised as needed if reasonable improvements can be made. The program shall consist of the following components.

a. Best Management Practices

Minimum best management practices (BMPs) include: standard plans and specifications, maintenance of storm drain systems, street sweeping, litter control, spill response, and hazardous material disposal.

- b. **Stormwater Discharge Monitoring**
Possible results of a stormwater discharge monitoring program include estimates of: the quality of stormwater discharges, the effectiveness of BMPs and the *Stormwater Quality Management Program*, and impacts on receiving waters. Stormwater discharge monitoring shall be conducted in accordance with the latest approved stormwater monitoring plan.
- c. **Illegal Discharge Detection & Elimination**
Programs are implemented to detect and eliminate illegal discharges.
- d. **Structural Controls for Water Quality Improvements**
Structural controls for water quality improvements are considered for inclusion in site drainage plans, storm drain projects, and flood control projects where applicable.
- e. **Discharges to storm drains and watercourses**
Each permittee shall submit a plan and schedule in the first annual report to begin implementation of a program to regulate significant stormwater discharges to storm drains and watercourses within their boundaries, including those from construction sites subject to NPDES permitting requirements, "stormwater discharges associated with industrial activity" as defined at 40 CFR §122.26(b)(14), and any other significant industrial, commercial, institutional, or other source.
- f. **Public Education & Participation**
Possible activities include public *Stormwater Quality Management Program* meetings, volunteer work groups, storm drain stenciling, brochures, radio, television, internet, and presentations to schools and special interest groups.
- g. **Intergovernmental Coordination**
Appropriate governmental agencies are included in implementation of the *Stormwater Quality Management Program*.

B. MONITORING AND REPORTING

1. Stormwater Monitoring Plan

The permittees shall submit a stormwater monitoring plan for the following year on or before November 1 each year. The plan shall include the use of *Environmental Indicators* if appropriate. The plans are subject to approval by the Division.

2. Samples and Measurements

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

3. Certified Laboratory

Analyses shall be performed by a State of Nevada certified laboratory. Results from this lab must accompany the Annual Reports.

4. Test Procedures

Test procedures for the analysis of pollutants shall conform to regulations (40 CFR, Part 136) published pursuant to Section 304(h) of the Act, under which such procedures may be required unless other procedures are approved by the Division.

5. Recording the Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. exact place, date, and time of sampling
- b. dates the analyses were performed
- c. person(s) who performed the analyses
- d. analytical techniques or methods used, and
- e. results of all required analyses.

6. Additional Monitoring by Permittee

If the permittee performs any additional monitoring beyond that required by the stormwater monitoring plan the results of such monitoring shall be reported.

7. **Modification of Monitoring Frequency and Sample Type**
After considering monitoring data, stream flow, discharge flow and receiving water conditions, the Division, may for just cause, modify the monitoring frequency and/or sample type by issuing an order to the permittee.

8. **Annual Reports**
The permittees shall submit an annual report on or before each anniversary of the effective date of this permit. The reports shall be subject to approval by the Division. The reports shall include:
- a. Current *Stormwater Quality Management Program*
 - b. Proposed *Stormwater Quality Management Program*
 - c. Data analysis and pollutant load estimates
 - d. Drainage basin map updates
 - e. Inspections and enforcements
 - f. Public education activities
 - g. Annual expenditures and budget for coming year.

9. **Submittal of Reports & Plans**
An original signed copy of all reports and plans required herein shall be submitted to the State at the following address:

Stormwater Coordinator
Bureau of Water Pollution Control
Nevada Division of Environmental Protection
333 West Nye Lane
Carson City, NV 89706-0851

A copy of all reports and plans required herein shall be submitted to the Regional Administrator at the following address:

Regional Administrator W-4-1
U. S. Environmental Protection Agency Region IX
75 Hawthorne Street
San Francisco, CA 94105

10. **Records Retention**
All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation, shall be retained for a minimum of three (3) years, or longer if required by the Administrator.

PART II

A. MANAGEMENT REQUIREMENTS

1. Operation of Storm Drain Systems

The permittees shall maintain in good working order and operate as effectively as possible all storm drain systems with ultimate discharge to receiving waters named on page one of this permit.

2. Implementation of BMPs

The permittees shall implement all BMPs used to comply with this permit as effectively as possible.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

4. Removed Substances

Solids or other pollutants removed in the course of treatment or control of stormwater shall be disposed of in a manner such as to prevent any pollution from such materials from entering any surface water.

B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the Administrator and/or his authorized representatives, upon the presentation of credentials:

- a. to inspect any part of the permittee's storm drain systems or to enter upon the permittee's premises in which any records are required to be kept under the terms and conditions of this permit; and
- b. at reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to perform any necessary sampling to determine compliance with this permit or to sample any discharge.

2. Transfer of Ownership or Control

In the event of any change in control or ownership of storm drain systems covered by this permit, the permittee shall notify the succeeding owner or controller of the existence of this permit, by letter, a copy of which shall be

forwarded to the Administrator. All transfer of permits shall be approved by the Division.

3. **Availability of Reports**

Except for data determined to be confidential under NRS 445A.665, all reports and plans prepared in accordance with the terms of this permit shall be available for public inspection at the office of the Division. As required by the Act, effluent data shall not be considered confidential.

Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in NRS 445A.710.

4. **Furnishing False Information and Tampering with Monitoring Devices**

Any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan or other document filed or required to be maintained by the provisions of NRS 445A.300 to 445A.730, inclusive, or by any permit, rule, regulation or order issued pursuant thereto, or who falsifies, tampers with or knowingly renders inaccurate any monitoring device or method required to be maintained under the provisions of NRS 445A.300 to 445A.730, inclusive, or by any permit, rule, regulation or order issued pursuant thereto, is guilty of a gross misdemeanor and shall be punished by a fine of not more than \$10,000 or by imprisonment. This penalty is in addition to any other penalties, civil or criminal, provided pursuant to NRS 445A.300 to 445A.730, inclusive.

5. **Penalty for Violation of Permit Conditions**

Nevada Revised Statutes NRS 445A.675 provides that any person who violates a permit condition is subject to administrative and judicial sanctions as outlined in NRS 445A.690 through 445A.710.

6. **Permit Modification, Suspension or Revocation**

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

- a. violation of any terms or conditions of this permit;
- b. obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
- c. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

7. **Liability**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable Federal, State or local laws, regulations, or ordinances.

8. **Property Rights**

The issuance of this permit does not convey any property rights, in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

9. **Severability**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provisions of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

PART III

OTHER REQUIREMENTS

1. **Annual Fee**

The permittees shall remit an annual review and services fee in accordance with NAC 445A.232 starting July 1, 1998 and every year thereafter until the permit is terminated.

2. **Reapplication**

The permittees shall reapply not later than 180 days before this permit expires.

3. **Signatures required on applications, reports, and plans.**

a. Applications, reports, and plans submitted to the Division must be signed by a person listed in parts (i) through (iv) below; or by a duly authorized representative of that person.

(i) A responsible corporate officer of the corporation

(ii) A general partner of the partnership

(iii) The proprietor of the sole proprietorship

(iv) A principal executive officer or ranking elected official of a public agency.

b. A person is a duly authorized representative of a person listed in paragraph a. above if that authorization is made in writing to the Division.

c. Each application, report, and plan submitted to the Division must contain a certification by the person signing the application, report, or plan that he is familiar with the information provided, that to the best of his knowledge and belief the information is complete and accurate and that he has the authority to sign and execute the application.

d. **Changes to Authorization**

If an authorization under paragraph b. of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph b. of this section must be submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.

Appendix B

ADDENDUM NO. 1 TO AGREEMENT DATED JULY 24, 1990
REGARDING NATIONAL POLLUTANT DISCHARGE ELIMINATION
STORM WATER PERMIT IMPLEMENTATION AGREEMENT

THIS ADDENDUM NO. 1 is made this 25th day of April, 2001,

by and between the City of Reno, a municipal corporation of the State of Nevada ("Reno"), the City of Sparks, a municipal corporation of the State of Nevada ("Sparks"), Washoe County, a political subdivision of the State of Nevada, ("County") and the Nevada Department of Transportation ("NDOT"), herein collectively referred to as "Parties".

WHEREAS, the Parties entered into an agreement on July 24, 1990, regarding the National Pollutant Discharge Elimination Storm Water Permit Implementation to Agreement;

WHEREAS, paragraph 8 of the agreement provides that the agreement shall have a term of five (5) years from the first day of August, 1990, subject to automatic renewal for a like period in the absence of objection.

WHEREAS, as of August 1, 1995, no objection to contract renewal was made and, pursuant to paragraph 8 of the agreement, the term of the agreement was extended to August 1, 2000.

WHEREAS, the basis of the agreement is continuing, the Parties have continued to act and operate under the agreement and the Parties desire to extend the agreement.

NOW, THEREFORE, in consideration of the mutual promises and covenants set forth hereinafter, and for other good and valuable consideration, the Parties, their successors and assigns agree as follows:

1. The term of the July 24, 1990 Agreement by virtue of this Addendum No. 1 is

extended retroactively from August 1, 2000, for an additional five (5) years, subject to automatic renewal for another five (5) years in the absence of objection thereto made in writing by any party hereto ninety (90) days in advance of the renewal date.

2. LIMITED LIABILITY

The parties will not waive and attend to assert available NRS Chapter 41 liability limitations in all cases. Contract liability of both parties shall not be subject to punitive damages.

3. INDEMNIFICATION

a. Each party shall indemnify, hold harmless and defend, not excluding the other's right to participate, the other from and against all liability claims, actions, damages, losses, and expenses including but not limited to attorneys' fees and costs arising out of any alleged negligent or willful acts or omissions of its officers, employees, and agents. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity, which would otherwise exist, to any party or person described in this paragraph.

b. The indemnification obligation under this paragraph is conditioned upon receipt of prompt written notice by the indemnifying party, of the indemnified party's actual notice of any actual or pending claim or cause of action. The indemnifying party shall not be liable to hold harmless any attorneys' fees and costs for the indemnified party's chosen right to participate with legal counsel.

4. The remainder of the July 24, 1990 Agreement shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have approved and executed this

Addendum No. 1 the day and year herein above first mentioned.

CITY OF RENO

BY

Jeff Griffin
Jeff Griffin, Mayor

ed Code
Clerk of the City of Reno

CITY OF SPARKS

BY

Tony Armstrong
Tony Armstrong, Mayor

Frankie Sue Del Papa
Clerk of the City of Sparks

WASHOE COUNTY

BY

James M. Shaw
James M. Shaw, Chairman

ATTEST:

Barry L. R.
Washoe County Clerk

NEVADA DEPARTMENT OF
TRANSPORTATION

BY

Thomas E. H.
Director

ATTEST:

Sp. Christopherson
Administrative Services Officer

APPROVED AS TO FORM

Susan Ball Rothe
Susan Ball Rothe, Reno Deputy
City Attorney

APPROVED AS TO FORM

David C. Creekman
David C. Creekman, Sparks Senior
Assistant City Attorney

APPROVED AS TO FORM AND LEGALITY
Frankie Sue Del Papa
Attorney General

BY

Frankie Sue Del Papa
Deputy Attorney General

A-1738
A.I. 5.10
7/23/90AGREEMENTNATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
STORM WATER PERMIT IMPLEMENTATION AGREEMENT

THIS AGREEMENT, made and entered into this 24TH day of July, 1990, by and between the City of Reno, Nevada, a municipal corporation organized and existing under and by virtue of the laws of the State of Nevada, hereinafter called "Reno"; the City of Sparks, Nevada, a municipal corporation organized and existing under and by virtue of the laws of the State of Nevada, hereinafter called "Sparks"; Washoe County, a political subdivision of the State of Nevada, hereinafter called "County"; and the Nevada Department of Transportation, hereinafter called "NDOT".

W I T N E S S E T H:

WHEREAS, Congress in 1987 amended Section 402 of the Federal Clean Water Act (33 USCA Section 1342(p)) to require the Federal Environmental Protection Agency ("EPA") to promulgate regulations for applications for permits for storm water discharges; and

WHEREAS, these permit regulations will require the control of pollutants from storm water discharges by requiring a national pollutant discharge elimination system ("NPDES") permit which would allow the lawful discharge of storm waters into waters of the United States; and

WHEREAS, these EPA regulations will require NPDES permits for discharge from municipal storm sewers on a system-wide or

jurisdiction-wide basis; and

WHEREAS, Reno, Sparks, County and NDOT desire to develop an integrated storm water discharge management program with the objective of improving water quality; and

WHEREAS, the Nevada Division of Environmental Protection ("NDEP") has been delegated authority by the EPA for administration of the NPDES storm water permit application process within the State of Nevada; and

WHEREAS, Reno, Sparks, County and NDOT will be designated as co-permittees by NDEP; and

WHEREAS, Reno has been designated as the lead agency on the permit; and

WHEREAS, cooperation between Reno, Sparks, County and NDOT to jointly file an application for an NPDES storm water permit is in the best of interest of Reno, Sparks, County and NDOT; and

WHEREAS, the co-permittees are willing to share the expertise of their staffs jointly in seeking and implementing certain requirements of the NPDES storm water permit.

NOW, THEREFORE, the parties hereto do mutually agree as follows:

1. Filing Status. Reno, Sparks, County and NDOT will file an application with NDEP for a storm water permit as co-permittees. Each individual city, the County and NDOT will be a co-permittee under said permit.

2. Delegation of Responsibilities. The responsibilities of each of the parties hereto shall be as follows:

a. Reno shall administer permit compliance by:

- (1) Coordinating implementation and annual operating budgets for jointly shared tasks.
- (2) Consolidating and submitting reports prepared by the several parties required by the NPDES permit.
- (3) Maintaining knowledge of and advising the parties regarding current and proposed state and federal policies, regulations and programs that impact nonpoint source pollution programs, and assisting the parties in the development and presentation of positions on these issues before state and federal agencies.
- (4) Formally advising the cognizant state and federal agencies of termination of this Agreement.

b. Reno, Sparks, County and NDOT shall:

- (1) Each comply with the NPDES permit conditions applicable to its own areas of responsibility.
- (2) Each participate in storm water permit coordinating committee meetings.
- (3) Each fund and implement permit compliance efforts within its own areas of responsibility and will fund its negotiated share of all joint efforts.
- (4) Each provide timely and accurate reports to Reno on compliance with applicable provisions of the NPDES permit and program implementation.

3. Coordinating Committee. There shall be a

coordinating committee consisting of four members and known as the "Storm Water Permit Coordinating Committee". Each of the parties hereto shall appoint in writing a committee member to the City of Reno Sanitary Engineer, who shall act as executive officer for the committee. Committee members shall serve without compensation or reimbursement, except as they may be entitled to the same from their employer. The procedures of the coordinating committee shall be as follows:

a. At its first meeting in each fiscal year, the members of the coordinating committee shall elect one of themselves to serve as chairman of said committee. The chairman shall serve as such until the election of this successor in the next fiscal year, or until the cessation of his membership on the committee, whichever is earlier. Vacancies in the office of chairman occurring between regular elections may be filled by the committee electing a chairman to serve until the next regular election. The chairman shall preside at all meeting of said coordinating committee. In the event the chairman shall be absent from any meeting, the members of the committee may elect a chairman pro-tem to serve as chairman during the latter's absence.

b. Reno shall provide a secretary for the coordinating committee. Said secretary shall keep minutes of said committee's proceedings and shall also have custody of all books, records, and papers of said committee.

c. Regular meetings of the coordinating committee shall be held at a time and place to be determined by the committee. Special meetings may be called at any time by the chairman or by two other members, to be held at a reasonable time and place specified in the notice calling the special meeting. Such notice shall be given of regular and special meetings as may be required by resolution of the committee and by the requirements of the Nevada Open Meeting Law, NRS Chapter 241.

d. Except as may be otherwise provided by resolution of the committee, the procedures to be followed by the coordinating committee at its meetings shall be those set forth in Robert's Rules of Order. The coordinating committee may act by resolution or motion.

e. The coordinating committee shall have the following powers and duties in addition to the powers and duties granted elsewhere in this Agreement:

- (1) Prepare an annual work program and budget and recommend the same to Reno, Sparks, County and NDOT for inclusion in their respective work programs and budgets.

- (2) Tender its advice to the City Councils of Reno and Sparks, the County Commission and the Director of NDOT with respect to any and all matters relating to storm water permit compliance and policies relative thereto.

(3) Tender its advice to the City Councils of Reno and Sparks, the County Commission and the Director of NDOT with respect to amendments to this Agreement.

4. Program Costs. All shared costs, including the cost of the NPDES permit, will initially be allocated to each co-permittee by taking the total shared costs and dividing by the number of co-permittees for the first year only. Cost sharing in subsequent years shall be negotiated on an annual basis. The projected shared costs of the first program year are estimated to not exceed Thirty Thousand Dollars and NO/100 (\$30,000.00). Each co-permittee will collect joint task shared costs on a fiscal year basis and report these costs to the coordinating committee at the end of the fiscal year. Each co-permittee responsible for a portion of the shared costs shall promptly reimburse to another co-permittee requesting the same its portion of the shared costs on any joint task.

5. Withdrawal From the Agreement. Any party hereto may withdraw from this Agreement and the joint program contemplated hereby sixty (60) days after giving written notice to all the other participants. Any withdrawing participant shall remain liable for its portion of any shared costs incurred to date of withdrawal.

6. Non-compliance With Permit Requirements. Any co-permittee found in non-compliance with the conditions of the NPDES permit within its own jurisdictional responsibilities shall be solely liable for any lawfully assessed penalties.

7. Authorized Signatures. The County Director of Public Works and the respective City Engineers or Directors of Public Works and the Director of NDOT shall be authorized to execute the application(s) for NPDES storm water permit(s), and to take all other necessary procedural steps to file the application(s) for NPDES storm water permit(s).

8. This Agreement shall have a term of five (5) years from the first day of August, 1990, subject to automatic renewal for a like period in the absence of objection thereto made in writing by any party hereto ninety (90) days in advance of the renewal date.

9. Amendments to Agreement. This Agreement may be amended by consent of the co-permittees. No amendment of this Agreement shall be effective unless it is in writing and signed by the duly authorized representatives of the co-permittees.

10. Governing Law. This Agreement will be governed and construed in accordance with the laws of the State of Nevada. If any provision or provisions of this Agreement shall be held to be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in anyway be affected or impaired thereby.

11. Consent to Breach Not Waiver. No term or provision hereof shall be deemed waived and no breach excused, unless such waiver or consent shall be in writing and signed by the co-permittee alleged to have waived or consented. Any consent by any co-permittee to, or waiver of, a breach by the other, whether

express or implied, shall not constitute a consent to, waiver of, or excuse for any other different or subsequent breach.

12. Applicability of Prior Agreements. This document constitutes the entire agreement between the co-permitees with respect to the subject matter. All prior agreements, representations, statements, negotiations and undertakings are superseded hereby.

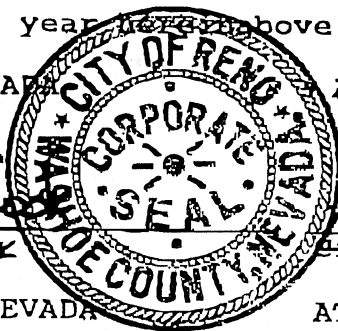
IN WITNESS WHEREOF, the parties hereto have signed their names the day and year ~~above~~ first mentioned.

CITY OF RENO, NEVADA

ATTEST:

BY *Shirley*

Mayor CITY CLERK



Peter J. ...
City Clerk of the City of Reno
MAYOR

CITY OF SPARKS, NEVADA

ATTEST:

BY *David Lawson*

Mayor

John L. ...
City Clerk of the City of Sparks



WASHOE COUNTY, NEVADA

ATTEST:

BY *...*

Chairman, Board of Commissioners

...
Washoe County Clerk

NEVADA DEPARTMENT OF
TRANSPORTATION

ATTEST:

BY *...*

Director

Jan Christopherson
for: Administrative Services Officer
NDOT

APPROVED AS TO FORM

8

...
City Attorney